WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Tuesday, August 01, 2006

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L6	(L5 and pMUC10)	5
☐	L5	(L2 and monoclonal)	29
☐	L4	(L2 and tanden repeat)	0
☐	L3	L2 and "SM-3 near antibody"	0
☐	L2	(L1 and SM-3)	30
☐	L1	human and "polymorphic epithelial mucin"	341

END OF SEARCH HISTORY

Welcome to DialogClassic Web(tm)

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 Dialog level 05.12.03D
Last logoff:  01aug06 10:58:14
Logon file001 01aug06 13:44:09
 * * *

File   1:ERIC 1966-2006/June
       (c) format only 2006 Dialog

      Set  Items  Description
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Cost is in DialUnits
?

B 155, 159, 10, 203, 35, 5, 467, 73, 434, 34
       01aug06 13:44:38 User290558 Session D63.1
            $0.40    0.113 DialUnits File1
     $0.40  Estimated cost File1
     $0.13  INTERNET
     $0.53  Estimated cost this search
     $0.53  Estimated total session cost   0.113 DialUnits

SYSTEM:OS  - DIALOG OneSearch
  File 155:MEDLINE(R) 1950-2006/Jul 31
         (c) format only 2006 Dialog
  File 159:Cancerlit 1975-2002/Oct
         (c) format only 2002 Dialog
 *File 159: Cancerlit is no longer updating.
Please see HELP NEWS159.
  File  10:AGRICOLA 70-2006/May
         (c) format only 2006 Dialog
  File 203:AGRIS 1974-2006/Mar
         Dist by NAL, Intl Copr. All rights reserved
  File  35:Dissertation Abs Online 1861-2006/Jun
         (c) 2006 ProQuest Info&Learning
  File   5:Biosis Previews(R) 1969-2006/Jul W4
         (c) 2006 The Thomson Corporation
  File 467:ExtraMED(tm) 2000/Dec
         (c) 2001 Informania Ltd.
 *File 467: F467 will close on February 1, 2006.                    7.
  File  73:EMBASE 1974-2006/Aug 01
         (c) 2006 Elsevier Science B.V.
  File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 2006 The Thomson Corp
  File  34:SciSearch(R) Cited Ref Sci 1990-2006/Jul W4
         (c) 2006 The Thomson Corp

      Set  Items  Description
      ---  -----  -----------
?

S (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
          170176  POLYMORPHIC
          729373  EPITHELIAL
           54146  MUCIN
            1118  POLYMORPHIC(N)EPITHELIAL(N)MUCIN
          305297  CLONE
      S1      27  (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
?
```

```
S (EPITHELIAL (W) MUCIN) AND CLONE
          729373  EPITHELIAL
           54146  MUCIN
            2156  EPITHELIAL(W)MUCIN
          305297  CLONE
      S2      43  (EPITHELIAL (W) MUCIN) AND CLONE
?


Set     Items   Description
S1         27   (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2         43   (EPITHELIAL (W) MUCIN) AND CLONE
?

S S1 AND SM-3
              27  S1
              84  SM-3
      S3       0  S1 AND SM-3
?

S S2 AND SM-3
              43  S2
              84  SM-3
      S4       0  S2 AND SM-3
?


Set     Items   Description
S1         27   (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2         43   (EPITHELIAL (W) MUCIN) AND CLONE
S3          0   S1 AND SM-3
S4          0   S2 AND SM-3
?

S (S1 AND (SM (W) 3))
Processing
Processed  10 of  10 files ...
Completed processing all files
              27  S1
           63392  SM
        12222278  3
             732  SM(W)3
      S5       1  (S1 AND (SM (W) 3))
?


Set     Items   Description
S1         27   (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2         43   (EPITHELIAL (W) MUCIN) AND CLONE
S3          0   S1 AND SM-3
S4          0   S2 AND SM-3
S5          1   (S1 AND (SM (W) 3))
?

S S2 AND (SM (W) 3))
>>>Unmatched parentheses
?

S S2 AND (SM (W) 3)
Processing
```

```
             43  S2
          63392  SM
       12222278  3
            732  SM(W)3
      S6      1  S2 AND (SM (W) 3)
?


Set     Items   Description
S1         27   (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2         43   (EPITHELIAL (W) MUCIN) AND CLONE
S3          0   S1 AND SM-3
S4          0   S2 AND SM-3
S5          1   (S1 AND (SM (W) 3))
S6          1   S2 AND (SM (W) 3)
?

TYPE S5/FULL/1

  5/9/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

09146831   PMID: 1370949
 Characterization of epithelial phenotypes in mortal and immortal human
 breast cells.
  Paine T M; Soule H D; Pauley R J; Dawson P J
  Michigan Cancer Foundation, Detroit 48201.
  International journal of cancer. Journal international du cancer (UNITED
STATES)   Feb 1 1992,  50  (3)  p463-73,  ISSN 0020-7136--Print
Journal Code: 0042124
  Contract/Grant No.: CA22453; CA; NCI; RR05529; RR; NCRR
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed
  Subfile:   INDEX MEDICUS
  We have previously described the mortal human breast epithelial culture
MCF-10M, that was derived from fibrocystic breast tissue, was cultivated in
medium with low calcium content for over 2 years, and spontaneously gave
rise to the immortal MCF-10 cell line. The emergence of immortalized cells,
characterized by growth in conventional calcium levels, from mortal cells
has proven to be a reproducible event. Here we report the establishment of
a second immortal line from MCF-10M, designated MCF-10-2, and establishment
of the MCF-12 immortal line after long-term cultivation of MCF-12M mortal
cells from reduction mammoplasty tissue. DNA fingerprinting demonstrated
the independent, human origin and lineage of the MCF-10-2 and MCF-12 cell
lines. Both lines require cortisol and EGF for maximal growth. The
expression in these cultures of in vivo breast epithelial phenotypes was
analyzed using 2-dimensional gel Western blots and immunoperoxidase
staining with antibodies to cytokeratins and polymorphic epithelial mucin.
MCF-10M and MCF-12M retain the cytokeratin profile of the luminal cell (7,
8, 18, 19), and also express cytokeratin 14, found predominantly in basal
cells. The immortal lines express a similar profile, except that
cytokeratin 19, a component of the fully differentiated luminal cell, is
not expressed in the more uniform population seen in MCF-10 and MCF-12, but
is retained in the morphologically mixed, less-selected population of
MCF-10-2. Epitopes on the polymorphic epithelial mucin, recognized by
antibodies HMFG 1, HMFG 2 and SM-3, were detected in the mortal cultures
```

and in the immortal lines, indicating the occurrence of both normal and abnormal mucin processing. MCF-10, MCF-10-2 and MCF-12 cells do not form tumors in nude mice, but appear to organize as duct-like structures before regressing in the 5th week post injection.
Descriptors: *Breast--cytology--CY; Animals; Antibodies, Monoclonal; Blotting, Western; Breast--immunology--IM; Cell Division; Cell Line; Cell Survival; Clone Cells; DNA Fingerprinting; Electrophoresis, Gel, Two-Dimensional; Epithelial Cells; Epithelium--immunology--IM; Humans; Immunoenzyme Techniques; In Vitro; Keratin--chemistry--CH; Mice; Mice, Nude ; Polymorphism, Restriction Fragment Length; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.; Time Factors
CAS Registry No.: 0 (Antibodies, Monoclonal); 68238-35-7 (Keratin)
Record Date Created: 19920306
Record Date Completed: 19920306
?

Set	Items	Description
S1	27	(POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2	43	(EPITHELIAL (W) MUCIN) AND CLONE
S3	0	S1 AND SM-3
S4	0	S2 AND SM-3
S5	1	(S1 AND (SM (W) 3))
S6	1	S2 AND (SM (W) 3)

?

TYPE S6/FULL/1

6/9/1 (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09146831 PMID: 1370949
Characterization of epithelial phenotypes in mortal and immortal human breast cells.
Paine T M; Soule H D; Pauley R J; Dawson P J
Michigan Cancer Foundation, Detroit 48201.
International journal of cancer. Journal international du cancer (UNITED STATES) Feb 1 1992, 50 (3) p463-73, ISSN 0020-7136--Print
Journal Code: 0042124
Contract/Grant No.: CA22453; CA; NCI; RR05529; RR; NCRR
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed
Subfile: INDEX MEDICUS
We have previously described the mortal human breast epithelial culture MCF-10M, that was derived from fibrocystic breast tissue, was cultivated in medium with low calcium content for over 2 years, and spontaneously gave rise to the immortal MCF-10 cell line. The emergence of immortalized cells, characterized by growth in conventional calcium levels, from mortal cells has proven to be a reproducible event. Here we report the establishment of a second immortal line from MCF-10M, designated MCF-10-2, and establishment of the MCF-12 immortal line after long-term cultivation of MCF-12M mortal cells from reduction mammoplasty tissue. DNA fingerprinting demonstrated the independent, human origin and lineage of the MCF-10-2 and MCF-12 cell lines. Both lines require cortisol and EGF for maximal growth. The expression in these cultures of in vivo breast epithelial phenotypes was analyzed using 2-dimensional gel Western blots and immunoperoxidase

staining with antibodies to cytokeratins and polymorphic epithelial mucin. MCF-10M and MCF-12M retain the cytokeratin profile of the luminal cell (7, 8, 18, 19), and also express cytokeratin 14, found predominantly in basal cells. The immortal lines express a similar profile, except that cytokeratin 19, a component of the fully differentiated luminal cell, is not expressed in the more uniform population seen in MCF-10 and MCF-12, but is retained in the morphologically mixed, less-selected population of MCF-10-2. Epitopes on the polymorphic epithelial mucin, recognized by antibodies HMFG 1, HMFG 2 and SM-3, were detected in the mortal cultures and in the immortal lines, indicating the occurrence of both normal and abnormal mucin processing. MCF-10, MCF-10-2 and MCF-12 cells do not form tumors in nude mice, but appear to organize as duct-like structures before regressing in the 5th week post injection.
Descriptors: *Breast--cytology--CY; Animals; Antibodies, Monoclonal; Blotting, Western; Breast--immunology--IM; Cell Division; Cell Line; Cell Survival; Clone Cells; DNA Fingerprinting; Electrophoresis, Gel, Two-Dimensional; Epithelial Cells; Epithelium--immunology--IM; Humans; Immunoenzyme Techniques; In Vitro; Keratin--chemistry--CH; Mice; Mice, Nude ; Polymorphism, Restriction Fragment Length; Research Support, Non-U.S. Gov't; Research Support, U.S. Gov't, P.H.S.; Time Factors
CAS Registry No.: 0 (Antibodies, Monoclonal); 68238-35-7 (Keratin)
Record Date Created: 19920306
Record Date Completed: 19920306
?

S ((SM (W) 3) AND (MONOCLONAL OR ANTIBODY)
>>>Unmatched parentheses
?

S (SM (W) 3) AND MONOCLONAL OR ANTIBODY
Processing
Processed 10 of 10 files ...
Completed processing all files
63392 SM
12222278 3
732 SM(W)3
849081 MONOCLONAL
1764982 ANTIBODY
S7 1765000 (SM (W) 3) AND MONOCLONAL OR ANTIBODY
?

S ((SM (W) 3) AND MONOCLONAL OR ANTIBODY)
Processing
63392 SM
12222278 3
732 SM(W)3
849081 MONOCLONAL
1764982 ANTIBODY
S8 1765000 ((SM (W) 3) AND MONOCLONAL OR ANTIBODY)
?

S ((SM (W) 3) AND ANTIBODY)
63392 SM
12222278 3
732 SM(W)3
1764982 ANTIBODY
S9 88 ((SM (W) 3) AND ANTIBODY)
?

S S9 AND MUCIN

```
              88  S9
           54146  MUCIN
     S10      50  S9 AND MUCIN
?

S (S10 AND GENE OR CLONE)
              50  S10
         4322169  GENE
          305297  CLONE
     S11  305313  (S10 AND GENE OR CLONE)
?


Set     Items   Description
S1         27   (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2         43   (EPITHELIAL (W) MUCIN) AND CLONE
S3          0   S1 AND SM-3
S4          0   S2 AND SM-3
S5          1   (S1 AND (SM (W) 3))
S6          1   S2 AND (SM (W) 3)
S7    1765000   (SM  (W) 3) AND MONOCLONAL OR ANTIBODY
S8    1765000   ((SM (W) 3) AND MONOCLONAL OR ANTIBODY)
S9         88   ((SM (W) 3) AND ANTIBODY)
S10        50   S9 AND MUCIN
S11    305313   (S10 AND GENE OR CLONE)
?

S (S10 AND CLONE)
              50  S10
          305297  CLONE
     S12       4  (S10 AND CLONE)
?


Set     Items   Description
S1         27   (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2         43   (EPITHELIAL (W) MUCIN) AND CLONE
S3          0   S1 AND SM-3
S4          0   S2 AND SM-3
S5          1   (S1 AND (SM (W) 3))
S6          1   S2 AND (SM (W) 3)
S7    1765000   (SM  (W) 3) AND MONOCLONAL OR ANTIBODY
S8    1765000   ((SM (W) 3) AND MONOCLONAL OR ANTIBODY)
S9         88   ((SM (W) 3) AND ANTIBODY)
S10        50   S9 AND MUCIN
S11    305313   (S10 AND GENE OR CLONE)
S12         4   (S10 AND CLONE)
?

S (S10 AND DNA)
              50  S10
         3792863  DNA
     S13       7  (S10 AND DNA)
?


Set     Items   Description
S1         27   (POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2         43   (EPITHELIAL (W) MUCIN) AND CLONE
S3          0   S1 AND SM-3
```

```
S4           0   S2 AND SM-3
S5           1   (S1 AND (SM (W) 3))
S6           1   S2 AND (SM (W) 3)
S7     1765000   (SM  (W) 3) AND MONOCLONAL OR ANTIBODY
S8     1765000   ((SM (W) 3) AND MONOCLONAL OR ANTIBODY)
S9          88   ((SM (W) 3) AND ANTIBODY)
S10         50   S9 AND MUCIN
S11     305313   (S10 AND GENE OR CLONE)
S12          4   (S10 AND CLONE)
S13          7   (S10 AND DNA)
?

TYPE S10/MEDIUM,K/1-50

  10/K/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

12511522   PMID: 10455130
 Expression of core 2 beta-1,6-N-acetylglucosaminyltransferase in a human
 pancreatic cancer cell line results in altered expression of MUC1
 tumor-associated epitopes.
  Beum P V; Singh J; Burdick M; Hollingsworth M A; Cheng P W
  Department of Biochemistry and Molecular Biology, University of Nebraska
Medical Center, Omaha, Nebraska 68198, USA.
  Journal of biological chemistry (UNITED STATES)  Aug 27 1999,  274  (35)
  p24641-8,  ISSN 0021-9258--Print  Journal Code: 2985121R
  Contract/Grant No.: HL48242; HL; NHLBI; P30 CA36727; CA; NCI; RO1 CA69234
; CA; NCI
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed

  ... stable transfection of a human pancreatic adenocarcinoma cell line,
Panc1-MUC1, with the cDNA for mucin core 2 GlcNAc-transferase (C2GnT),
which creates the core 2 beta-1,6 branch in mucin -type glycans. These
cells lack endogenous C2GnT activity but express a recombinant human MUC1
cDNA...

... clones expressing different levels of C2GnT were characterized using
monoclonal antibodies CC49, CSLEX-1, and SM - 3 , which recognize
tumor-associated epitopes. Increased C2GnT expression led to greatly
diminished expression of the...

... transfectants could not bind to selectins. Increased C2GnT expression
also led to masking of the SM - 3 peptide epitope, which persisted after
the removal of sialic acid, further suggesting greater complexity of...
  ...Chemical Name: 3)-galactosyl-(1-4)-(fucopyranosyl-(1-3))-N-acetylgluco
samine; Antibodies, Monoclonal; Antibodies, Neoplasm; B72.3 antibody ;
CA-15-3 Antigen; Epitopes; Mucins; Oligosaccharides; Peptides;
Polysaccharides; SM3-MUC1 peptide; N-Acetylneuraminic Acid...


  10/K/2     (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

12055862   PMID: 9923971
```

A short synthetic peptide (DTRPAP) induces anti-mucin (MUC-1) antibody, which is reactive with human ovarian and breast cancer cells.

Avichezer D; Taylor-Papadimitriou J; Arnon R
Department of Immunology, The Weizmann Institute of Science, Rehovot, Israel.

Cancer biochemistry biophysics (ENGLAND) Jun 1998, 16 (1-2) p113-28, ISSN 0305-7232--Print Journal Code: 7506524
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

A short synthetic peptide (DTRPAP) induces anti- mucin (MUC-1) antibody , which is reactive with human ovarian and breast cancer cells.

The present study describes the production of a synthetic hexapeptide (DTRPAP)-based anti- mucin (MUC-1) antibody , similar to those produced using either the intact mucin antigen or tumor extracts. This antibody was generated by immunization of rabbits with the synthetic peptide conjugated to bovine serum albumin...
...a carrier. Using both the ELISA and FACS analysis methods, we have shown that the antibody is reactive with human ovarian and breast cancer cells, but not with normal epithelial breast cells. This antibody is different from the previously reported anti- mucin HMFG-1, HMFG-2 and SM - 3 monoclonal antibodies, since competitive experiments with the free synthetic peptide revealed only a 30% inhibition...

... ovarian (OVCAR-3) cancer cells, as compared to 78% inhibition of the anti-synthetic peptide antibody . The peptide was non-inhibitory for HMFG-2, and induced a significant and reproducible stimulation of the SM - 3 binding activity to the tumor cells.
; Animals; Antibodies--metabolism--ME; Antibody Specificity; Cytotoxicity, Immunologic; Enzyme-Linked Immunosorbent Assay; Flow Cytometry; Humans; Mice; Mice, Nude; Neoplasm Transplantation...

10/K/3 (Item 3 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09554550 PMID: 7679052

Multiple forms of intracellular and secreted mucins in a pancreatic cancer cell line.

Ho J J; Bi N; Siddiki B; Chung Y S; Yuan M; Kim Y S
Gastrointestinal Research Laboratory, Veterans Affairs Medical Center, San Francisco, California 94121.

Cancer research (UNITED STATES) Feb 15 1993, 53 (4) p884-90, ISSN 0008-5472--Print Journal Code: 2984705R
Contract/Grant No.: CA24321; CA; NCI
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... of the structures of mucins may assist in the development of new therapeutic approaches. Monoclonal antibody Ea6, developed against mucins purified from xenografts of the pancreatic cancer cell line SW1990, was used to identify a new type of pancreatic cancer mucin . The following characteristics suggest that Ea6 antibody reacts with the core structure

of O-linked oligosaccharides, the Tn antigen (N-acetylgalactosamine-serine ...

... buoyant densities (1.36 versus 1.44 g/ml) than mucins identified by another monoclonal antibody directed against SW1990 mucins, SPan-1, and were less acidic. High density and molecular mass...

... bond reduction. After partial deglycosylation secreted SPan-1 antigens reacted with MUC1 peptide specific antibodies, SM - 3 and HMFG-2, as well as polyclonal antisera directed against deglycosylated xenograft mucins. However, Ea6...

... prior treatment. No Ea6 reactivity was detected with this fraction. These results suggest that Ea6 antibody identifies a new population of mucins that is distinct from SPan-1 mucins.

10/K/4 (Item 4 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

09186073 PMID: 1372533
Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice.
Peat N; Gendler S J; Lalani N; Duhig T; Taylor-Papadimitriou J
Imperial Cancer Research Fund, Lincoln's Inn Fields, London, England.
Cancer research (UNITED STATES) Apr 1 1992, 52 (7) p1954-60, ISSN 0008-5472--Print Journal Code: 2984705R
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice.
The human MUC1 gene codes for the core protein of a mucin which is expressed by glandular epithelia and the carcinomas which develop from these tissues. The...

... glycosylated in cancers, and some antibodies show specificity in their reactions with the cancer-associated mucin , which also contains epitopes recognized by T-cells from breast and pancreatic cancer patients. For evaluating the potential use of mucin -reactive antibodies and mucin -based immunogens in cancer patients, a mouse model, expressing the MUC1 gene product PEM (polymorphic epithelial mucin) as a self antigen, would be extremely useful. To this end, we have developed transgenic...

... gene, which was very similar to the profile of expression seen in human tissues. The antibody SM - 3 is directed to a core protein epitope, which is selectively exposed in breast cancers and...

...more restricted distribution on normal human tissues. It was established that the distribution of the SM - 3 epitope of PEM in the tissues of the transgenic mice is similar to that seen...

10/K/5 (Item 5 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08991468 PMID: 1718981
Purification and characterization of a membrane-bound and a secreted mucin-type glycoprotein carrying the carcinoma-associated sialyl-Lea epitope on distinct core proteins.
Baeckstrom D; Hansson G C; Nilsson O; Johansson C; Gendler S J; Lindholm L
Department of Medical Biochemistry, University of Goteborg, Sweden.
Journal of biological chemistry (UNITED STATES) Nov 15 1991, 266 (32) p21537-47, ISSN 0021-9258--Print Journal Code: 2985121R
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Purification and characterization of a membrane-bound and a secreted mucin -type glycoprotein carrying the carcinoma-associated sialyl-Lea epitope on distinct core proteins.
Two mucin -type glycoproteins detected by the monoclonal antibody C50, which reacts with the carcinoma-associated sialyl-Lewis a and sialyl-lactotetraose epitopes, were...
... glycoproteins were purified from xenograft extracts and spent culture medium using perchloric acid precipitation, monoclonal antibody affinity purification, ion exchange chromatography, and gel filtration. Both glycoproteins were unaffected by reduction and...

... of the intact glycoproteins showed that both H-CanAg and L-CanAg expressed the monoclonal antibody -defined, sialic acid-containing carbohydrate epitopes CA203 and CA242 as well as the Lewis a...

... terminal part of the MUC1 gene product, core protein of the carcinoma-associated polymorphic epithelial mucin (PEM) and DU-PAN-2, reacted with H-CanAg. After deglycosylation with trifluoromethanesulfonic acid, H-CanAg but not L-CanAg was recognized by the monoclonal antibodies SM - 3 and HMFG-2, directed to the tandem repeat of the PEM apoprotein. However, these antibodies...

10/K/6 (Item 6 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08195471 PMID: 2477336
A short sequence, within the amino acid tandem repeat of a cancer-associated mucin, contains immunodominant epitopes.
Burchell J; Taylor-Papadimitriou J; Boshell M; Gendler S; Duhig T
Imperial Cancer Research Fund, London, UK.
International journal of cancer. Journal international du cancer (UNITED STATES) Oct 15 1989, 44 (4) p691-6, ISSN 0020-7136--Print Journal Code: 0042124
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

A short sequence, within the amino acid tandem repeat of a cancer-associated mucin , contains immunodominant epitopes.
The polymorphic epithelial mucin (PEM) appears to be the target

molecule for many monoclonal antibodies (MAbs) which react with...

... have precisely mapped the epitopes of 4 MAbs reactive with the tandem repeats including one, SM - 3 , which shows enhanced tumour specificity. We report that the core of the SM - 3 epitope corresponds to the continuous amino acid sequence Pro-Asp-Thr-Arg-Pro. We also...

... However, none of these epitopes contain the proline found at the amino end of the SM - 3 determinant. These results are consistent with the idea that, in the cancer-associated mucin , premature termination of the carbohydrate side-chains results in the exposure of the SM - 3 epitope.
; Amino Acid Sequence; Antibodies, Monoclonal--analysis--AN; Antigens, Tumor-Associated, Carbohydrate--immunology--IM; Binding Sites, Antibody --genetics--GE; Binding Sites, Antibody --immunology--IM; Enzyme-Linked Immunosorbent Assay; Epitopes--immunology--IM; Humans; Molecular Sequence Data; Mucins--immunology...
Chemical Name: Antibodies, Monoclonal; Antigens, Tumor-Associated, Carbohydrate; Binding Sites, Antibody ; Epitopes; Mucins; DNA

10/K/7 (Item 7 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08087756 PMID: 2471698
A core protein epitope of the polymorphic epithelial mucin detected by the monoclonal antibody SM-3 is selectively exposed in a range of primary carcinomas.
Girling A; Bartkova J; Burchell J; Gendler S; Gillett C; Taylor-Papadimitriou J
Imperial Cancer Research Fund Clinical Oncology Unit, Guy's Hospital, London, UK.
International journal of cancer. Journal international du cancer (UNITED STATES) Jun 15 1989, 43 (6) p1072-6, ISSN 0020-7136--Print
Journal Code: 0042124
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

A core protein epitope of the polymorphic epithelial mucin detected by the monoclonal antibody SM - 3 is selectively exposed in a range of primary carcinomas.
The monoclonal antibody (MAb) SM - 3 , which was raised to chemically deglycosylated milk mucin , reacts with an epitope present on the core protein of this mucin which we have referred to as PEM (polymorphic epithelial mucin). Although this mucin is abundantly expressed by both the lactating breast and breast carcinomas, the antibody SM - 3 shows very little or no reactivity on the former but does react with 92% of breast carcinomas. Furthermore, SM - 3 stains primary carcinomas of the lung, colon and ovary, but on the corresponding normal tissue...

... level or not at all. These results indicate that an epitope masked in the normal mucin is exposed in the mucin produced by tumour cells, perhaps due to aberrant glycosylation. An extensive immunohistochemical study of other normal tissues reveals that the majority show only weak focal staining with SM - 3 or none at all, the distal tubules and collecting ducts of the kidney, and sebaceous...

10/K/8 (Item 8 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08050539 PMID: 2469454
Purification and biochemical characterisation of a novel breast carcinoma associated mucin-like glycoprotein defined by antibody 3E1.2.
Stacker S A; Tjandra J J; Xing P X; Walker I D; Thompson C H; McKenzie I F
Department of Pathology, University of Melbourne, Victoria, Australia.
British journal of cancer (ENGLAND) Apr 1989, 59 (4) p544-53, ISSN 0007-0920--Print Journal Code: 0370635
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

Purification and biochemical characterisation of a novel breast carcinoma associated mucin -like glycoprotein defined by antibody 3E1.2.
... from the sera, ascites and breast carcinoma tissue of patients with breast cancer using monoclonal antibody 3E1.2. The 3E1.2 defined antigen, termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin. The epitope defined by antibody 3E1.2 is sensitive to treatment by sodium periodate and neuraminidase, implying that both carbohydrate and sialic acid are required for binding of antibody 3E1.2. Sandwich immunoassays demonstrated that MSA+ molecules are likely to express repeated 3E1.2...

... glycoprotein. It is suggested that MSA has the same core protein as is recognised by antibody DF3 which has been used to clone the same cDNA as was cloned with antibodies HMFG-1, HMFG-2 and SM - 3 . However, the epitope detected by the 3E1.2 antibody is either absent or weakly expressed on human milk, human milk-fat globule membrane (HMFGM) or deglycosylated HMFGM--all of which react strongly with various anti-HMFG antibodies. The antibody 3E1.2 thus recognises a unique epitope of the high molecular weight glycoproteins of human...

10/K/9 (Item 9 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

07447846 PMID: 2443241
Development and characterization of breast cancer reactive monoclonal antibodies directed to the core protein of the human milk mucin.
Burchell J; Gendler S; Taylor-Papadimitriou J; Girling A; Lewis A; Millis R; Lamport D
Imperial Cancer Research Fund, London.
Cancer research (UNITED STATES) Oct 15 1987, 47 (20) p5476-82, ISSN 0008-5472--Print Journal Code: 2984705R
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

... of breast cancer reactive monoclonal antibodies directed to the core

protein of the human milk mucin .
A mucin molecule, which has a molecular weight of greater than 400,000 and which carries tumor...

... by affinity chromatography followed by passage through a size exclusion column. While treatment of the mucin with hydrogen fluoride for 1 h at 4 degrees C removed the peripheral oligosaccharides, treatment...

... a dominant polypeptide of about 68,000. This appears to be the size of the mucin core protein. Monoclonal antibodies have been developed that react with the stripped and partially stripped molecule but not with the intact mucin . From the initial screening on histological sections one of these antibodies, SM - 3 , reacts with 91% of breast carcinomas but shows little or no reactivity on benign mammary tumors, normal resting, pregnant, or lactating breast. It appears that this monoclonal antibody is reacting with an epitope that is usually masked by oligosaccharide moieties in normal cells...

10/K/10 (Item 1 from file: 159)
DIALOG(R)File 159:Cancerlit

02560227 99386938 PMID: 10455130
Expression of core 2 beta-1,6-N-acetylglucosaminyltransferase in a human pancreatic cancer cell line results in altered expression of MUC1 tumor-associated epitopes.
Beum P V; Singh J; Burdick M; Hollingsworth M A; Cheng P W
Department of Biochemistry and Molecular Biology, University of Nebraska Medical Center, Omaha, Nebraska 68198, USA.
J Biol Chem (UNITED STATES) Aug 27 1999, 274 (35) p24641-8, ISSN 0021-9258 Journal Code: 2985121R
Contract/Grant No.: HL48242; HL; NHLBI; P30 CA36727; CA; NCI; RO1 CA69234 ; CA; NCI
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

... stable transfection of a human pancreatic adenocarcinoma cell line, Panc1-MUC1, with the cDNA for mucin core 2 GlcNAc-transferase (C2GnT), which creates the core 2 beta-1,6 branch in mucin -type glycans. These cells lack endogenous C2GnT activity but express a recombinant human MUC1 cDNA...
... clones expressing different levels of C2GnT were characterized using monoclonal antibodies CC49, CSLEX-1, and SM - 3 , which recognize tumor-associated epitopes. Increased C2GnT expression led to greatly diminished expression of the...

... transfectants could not bind to selectins. Increased C2GnT expression also led to masking of the SM - 3 peptide epitope, which persisted after the removal of sialic acid, further suggesting greater complexity of...
...Chemical Name: 3)-galactosyl-(1-4)-(fucopyranosyl-(1-3))-N-acetylglucosamine; Antibodies, Monoclonal; Antibodies, Neoplasm; B72.3 antibody ; CA-15-3 Antigen; Epitopes; Mucins; Oligosaccharides; Peptides; Polysaccharides; SM3-MUC1 peptide; N-Acetylneuraminic Acid...

10/K/11 (Item 2 from file: 159)
DIALOG(R)File 159:Cancerlit

02499323 99120846 PMID: 9923971
A short synthetic peptide (DTRPAP) induces anti-mucin (MUC-1) antibody, which is reactive with human ovarian and breast cancer cells.
Avichezer D; Taylor-Papadimitriou J; Arnon R
Department of Immunology, The Weizmann Institute of Science, Rehovot, Israel.
Cancer Biochem Biophys (ENGLAND) Jun 1998, 16 (1-2) p113-28, ISSN 0305-7232 Journal Code: 7506524
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

A short synthetic peptide (DTRPAP) induces anti- mucin (MUC-1) antibody , which is reactive with human ovarian and breast cancer cells.
The present study describes the production of a synthetic hexapeptide (DTRPAP)-based anti- mucin (MUC-1) antibody , similar to those produced using either the intact mucin antigen or tumor extracts. This antibody was generated by immunization of rabbits with the synthetic peptide conjugated to bovine serum albumin...
...a carrier. Using both the ELISA and FACS analysis methods, we have shown that the antibody is reactive with human ovarian and breast cancer cells, but not with normal epithelial breast cells. This antibody is different from the previously reported anti- mucin HMFG-1, HMFG-2 and SM - 3 monoclonal antibodies, since competitive experiments with the free synthetic peptide revealed only a 30% inhibition...

... ovarian (OVCAR-3) cancer cells, as compared to 78% inhibition of the anti-synthetic peptide antibody . The peptide was non-inhibitory for HMFG-2, and induced a significant and reproducible stimulation of the SM - 3 binding activity to the tumor cells.
Minor Descriptors: Antibodies--metabolism--ME; Antibody Specificity; Cytotoxicity, Immunologic; Enzyme-Linked Immunosorbent Assay; Flow Cytometry; Mice; Mice, Nude; Neoplasm Transplantation; Peptide...

10/K/12 (Item 3 from file: 159)
DIALOG(R)File 159:Cancerlit

02060062 PMID: 94696132
Analyses of pp60(c-src) and epidermal growth factor receptor protein tyrosine kinases in a human colon adenocarcinoma cell line following induction of goblet cell-like characteristics by tumor necrosis factor-alpha.
Novotny-Smith
Univ. of Texas H.S.C. at Houston Grad. Sch. of Biomed. Sci.
Diss Abstr Int [B] 1993, 53 (12), ISSN 0419-4217
Document Type: THESIS
Languages: ENGLISH
Main Citation Owner: NOTNLM
Record type: Completed

... adenocarcinoma cell line is utilized as an in vitro model system in which to study mucin production. In response to treatment with tumor necrosis factor-alpha, DiFi cells acquire some properties of mucin -producing goblet cells including altered morphology, increased reactivity to wheat germ agglutinin, and increased mucin production as determined by

RNA expression as well as reactivity with the MUC-1 antibodies, HMFG-1 and SM - 3 . Thus, TNF-treated DiFi cells represent one of the few in vitro systems in which mucin expression can be induced. DiFi cells express an activated pp60(c-src), as do most...

... tyrosine phosphorylation of EGF receptor were observed as assessed by immunoblotting with an anti-phosphotyrosine antibody . In addition, [125I]-EGF cell surface binding was reduced approximately 3-fold following TNF treatment...
Chemical Name: Proto-Oncogene Protein pp60(c-src; Protein-Tyrosine Kinase ; polymorphic epithelial mucin ; Antibodies; Mucins; Receptors, Epidermal Growth Factor-Urogastrone; Tumor Necrosis Factor

10/K/13 (Item 4 from file: 159)
DIALOG(R)File 159:Cancerlit

01990334 93153790 PMID: 7679052
Multiple forms of intracellular and secreted mucins in a pancreatic cancer cell line.
Ho J J; Bi N; Siddiki B; Chung Y S; Yuan M; Kim Y S
Gastrointestinal Research Laboratory, Veterans Affairs Medical Center, San Francisco, California 94121.
Cancer Res (UNITED STATES) Feb 15 1993, 53 (4) p884-90, ISSN 0008-5472 Journal Code: 2984705R
Contract/Grant No.: CA24321; CA; NCI
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

... of the structures of mucins may assist in the development of new therapeutic approaches. Monoclonal antibody Ea6, developed against mucins purified from xenografts of the pancreatic cancer cell line SW1990, was used to identify a new type of pancreatic cancer mucin . The following characteristics suggest that Ea6 antibody reacts with the core structure of O-linked oligosaccharides, the Tn antigen (N-acetylgalactosamine-serine ...
... buoyant densities (1.36 versus 1.44 g/ml) than mucins identified by another monoclonal antibody directed against SW1990 mucins, SPan-1, and were less acidic. High density and molecular mass...

... bond reduction. After partial deglycosylation secreted SPan-1 antigens reacted with MUC1 peptide specific antibodies, SM - 3 and HMFG-2, as well as polyclonal antisera directed against deglycosylated xenograft mucins. However, Ea6...

... prior treatment. No Ea6 reactivity was detected with this fraction. These results suggest that Ea6 antibody identifies a new population of mucins that is distinct from SPan-1 mucins.

10/K/14 (Item 5 from file: 159)
DIALOG(R)File 159:Cancerlit

01924587 92200415 PMID: 1372533
Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice.

Peat N; Gendler S J; Lalani N; Duhig T; Taylor-Papadimitriou J
Imperial Cancer Research Fund, Lincoln's Inn Fields, London, England.
Cancer Res (UNITED STATES) Apr 1 1992, 52 (7) p1954-60, ISSN 0008-5472 Journal Code: 2984705R
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice.

The human MUC1 gene codes for the core protein of a mucin which is expressed by glandular epithelia and the carcinomas which develop from these tissues. The...

... glycosylated in cancers, and some antibodies show specificity in their reactions with the cancer-associated mucin , which also contains epitopes recognized by T-cells from breast and pancreatic cancer patients. For evaluating the potential use of mucin -reactive antibodies and mucin -based immunogens in cancer patients, a mouse model, expressing the MUC1 gene product PEM (polymorphic epithelial mucin) as a self antigen, would be extremely useful. To this end, we have developed transgenic...

... gene, which was very similar to the profile of expression seen in human tissues. The antibody SM - 3 is directed to a core protein epitope, which is selectively exposed in breast cancers and...

...more restricted distribution on normal human tissues. It was established that the distribution of the SM - 3 epitope of PEM in the tissues of the transgenic mice is similar to that seen...

10/K/15 (Item 6 from file: 159)
DIALOG(R)File 159:Cancerlit

01891633 92042052 PMID: 1718981
Purification and characterization of a membrane-bound and a secreted mucin-type glycoprotein carrying the carcinoma-associated sialyl-Lea epitope on distinct core proteins.
Baeckstrom D; Hansson G C; Nilsson O; Johansson C; Gendler S J; Lindholm L
Department of Medical Biochemistry, University of Goteborg, Sweden.
J Biol Chem (UNITED STATES) Nov 15 1991, 266 (32) p21537-47, ISSN 0021-9258 Journal Code: 2985121R
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Purification and characterization of a membrane-bound and a secreted mucin -type glycoprotein carrying the carcinoma-associated sialyl-Lea epitope on distinct core proteins.

Two mucin -type glycoproteins detected by the monoclonal antibody C50, which reacts with the carcinoma-associated sialyl-Lewis a and sialyl-lactotetraose epitopes, were...
... glycoproteins were purified from xenograft extracts and spent culture medium using perchloric acid precipitation, monoclonal antibody affinity purification, ion exchange chromatography, and gel filtration. Both glycoproteins were unaffected by reduction and...

... of the intact glycoproteins showed that both H-CanAg and L-CanAg expressed the monoclonal antibody -defined, sialic acid-containing carbohydrate epitopes CA203 and CA242 as well as the Lewis a...

... terminal part of the MUC1 gene product, core protein of the carcinoma-associated polymorphic epithelial mucin (PEM) and DU-PAN-2, reacted with H-CanAg. After deglycosylation with trifluoromethanesulfonic acid, H-CanAg but not L-CanAg was recognized by the monoclonal antibodies SM - 3 and HMFG-2, directed to the tandem repeat of the PEM apoprotein. However, these antibodies...

10/K/16 (Item 7 from file: 159)
DIALOG(R)File 159:Cancerlit

01781134 PMID: 91668429
EPITHELIAL MUCIN ANTIBODIES AND THEIR EPITOPES: CORE PROTEIN EPITOPES OF A POLYMORPHIC EPITHELIAL MUCIN (PEM).
Taylor-Papadimitriou; Burchell; Gendler; Boshell; Duhig
Imperial Cancer Res. Fund, P.O. Box 123, Lincoln's Inn Fields, London WC2A 3PX, UK
Non-serial 1989, Breast Cancer Immunodiagnosis and Immunotherapy. Ceriani RL, ed. New York, Plenum, p. 81-93, 1989.,
Document Type: MEETING PAPER
Languages: ENGLISH
Main Citation Owner: NOTNLM
Record type: Completed

EPITHELIAL MUCIN ANTIBODIES AND THEIR EPITOPES: CORE PROTEIN EPITOPES OF A POLYMORPHIC EPITHELIAL MUCIN (PEM).
Data have been obtained recently from a human mucin that is expressed by several simple epithelial cell types and abundantly by the lactating mammary gland and by many carcinomas. This mucin , called PEM because of the high degree of polymorphism seen at the DNA and protein...

... PEM repeat unit exhibit features that would be expected in the core protein of a mucin . There are five potential O glycosylation sites represented by serines and threonines separated by proline-rich stretches of 3, 5, and 7 AAs. The enhanced tumor specificity of the antibody SM - 3 directed to the deglycosylated PEM indicates that the epitopes to the core protein, which normally are masked, can be exposed in the cancer-associated mucin (CAM). Thus, at least some of the difference between the normally processed mucin and the mucin expressed in breast cancers may be due to differences in glycosylation patterns. The exposure of core protein epitopes in the cancer mucin could be due to underglycosylation of potential glycosylation sites or to a reduction in the length of the added oligosaccharide side chains. The mapping of the SM - 3 and HMFG-2 epitopes to AAs around a threonine residue in the tandem repeat sequence...

... for shorter oligosaccharide side chains on the CAM is provided by the observation that the SM - 3 epitope, which is only exposed in this form of the mucin , contains extra AAs flanking the HMFG-2 epitope, some of which apparently are masked in...

10/K/17 (Item 8 from file: 159)
DIALOG(R)File 159:Cancerlit

01752977 90007760 PMID: 2477336
A short sequence, within the amino acid tandem repeat of a cancer-associated mucin, contains immunodominant epitopes.
Burchell J; Taylor-Papadimitriou J; Boshell M; Gendler S; Duhig T
Imperial Cancer Research Fund, London, UK.
Int J Cancer (UNITED STATES) Oct 15 1989, 44 (4) p691-6, ISSN 0020-7136 Journal Code: 0042124
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

A short sequence, within the amino acid tandem repeat of a cancer-associated mucin , contains immunodominant epitopes.
The polymorphic epithelial mucin (PEM) appears to be the target molecule for many monoclonal antibodies (MAbs) which react with...

... have precisely mapped the epitopes of 4 MAbs reactive with the tandem repeats including one, SM - 3 , which shows enhanced tumour specificity. We report that the core of the SM - 3 epitope corresponds to the continuous amino acid sequence Pro-Asp-Thr-Arg-Pro. We also...
... However, none of these epitopes contain the proline found at the amino end of the SM - 3 determinant. These results are consistent with the idea that, in the cancer-associated mucin , premature termination of the carbohydrate side-chains results in the exposure of the SM - 3 epitope.
Minor Descriptors: Amino Acid Sequence; Antibodies, Monoclonal--analysis --AN; Antigens, Tumor-Associated, Carbohydrate--immunology--IM; Binding Sites, Antibody --genetics--GE; Binding Sites, Antibody --immunology--IM ; Enzyme-Linked Immunosorbent Assay; Epitopes--immunology--IM; Molecular Sequence Data; Mucins--immunology--IM...
Chemical Name: Antibodies, Monoclonal; Antigens, Tumor-Associated, Carbohydrate; Binding Sites, Antibody ; Epitopes; Mucins; DNA

10/K/18 (Item 9 from file: 159)
DIALOG(R)File 159:Cancerlit

01734841 89277584 PMID: 2471698
A core protein epitope of the polymorphic epithelial mucin detected by the monoclonal antibody SM-3 is selectively exposed in a range of primary carcinomas.
Girling A; Bartkova J; Burchell J; Gendler S; Gillett C; Taylor-Papadimitriou J
Imperial Cancer Research Fund Clinical Oncology Unit, Guy's Hospital, London, UK.
Int J Cancer (UNITED STATES) Jun 15 1989, 43 (6) p1072-6, ISSN 0020-7136 Journal Code: 0042124
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

A core protein epitope of the polymorphic epithelial mucin detected by the monoclonal antibody SM - 3 is selectively exposed in a range of primary carcinomas.
The monoclonal antibody (MAb) SM - 3 , which was raised to chemically deglycosylated milk mucin , reacts with an epitope present on the core

protein of this mucin which we have referred to as PEM (polymorphic epithelial mucin). Although this mucin is abundantly expressed by both the lactating breast and breast carcinomas, the antibody SM - 3 shows very little or no reactivity on the former but does react with 92% of breast carcinomas. Furthermore, SM - 3 stains primary carcinomas of the lung, colon and ovary, but on the corresponding normal tissue...

... level or not at all. These results indicate that an epitope masked in the normal mucin is exposed in the mucin produced by tumour cells, perhaps due to aberrant glycosylation. An extensive immunohistochemical study of other normal tissues reveals that the majority show only weak focal staining with SM - 3 or none at all, the distal tubules and collecting ducts of the kidney, and sebaceous...

10/K/19 (Item 10 from file: 159)
DIALOG(R)File 159:Cancerlit
(c) format only 2002 Dialog. All rts. reserv.

01728393 89228880 PMID: 2469454
Purification and biochemical characterisation of a novel breast carcinoma associated mucin-like glycoprotein defined by antibody 3E1.2.
Stacker S A; Tjandra J J; Xing P X; Walker I D; Thompson C H; McKenzie I F
Department of Pathology, University of Melbourne, Victoria, Australia.
Br J Cancer (ENGLAND) Apr 1989, 59 (4) p544-53, ISSN 0007-0920
Journal Code: 0370635
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Purification and biochemical characterisation of a novel breast carcinoma associated mucin -like glycoprotein defined by antibody 3E1.2.
... from the sera, ascites and breast carcinoma tissue of patients with breast cancer using monoclonal antibody 3E1.2. The 3E1.2 defined antigen, termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin. The epitope defined by antibody 3E1.2 is sensitive to treatment by sodium periodate and neuraminidase, implying that both carbohydrate and sialic acid are required for binding of antibody 3E1.2. Sandwich immunoassays demonstrated that MSA+ molecules are likely to express repeated 3E1.2...

... glycoprotein. It is suggested that MSA has the same core protein as is recognised by antibody DF3 which has been used to clone the same cDNA as was cloned with antibodies HMFG-1, HMFG-2 and SM - 3 . However, the epitope detected by the 3E1.2 antibody is either absent or weakly expressed on human milk, human milk-fat globule membrane (HMFGM) or deglycosylated HMFGM--all of which react strongly with various anti-HMFG antibodies. The antibody 3E1.2 thus recognises a unique epitope of the high molecular weight glycoproteins of human...

10/K/20 (Item 11 from file: 159)
DIALOG(R)File 159:Cancerlit
(c) format only 2002 Dialog. All rts. reserv.

01629625 88002032 PMID: 2443241
Development and characterization of breast cancer reactive monoclonal

antibodies directed to the core protein of the human milk mucin.
Burchell J; Gendler S; Taylor-Papadimitriou J; Girling A; Lewis A; Millis R; Lamport D
Imperial Cancer Research Fund, London.
Cancer Res (UNITED STATES) Oct 15 1987, 47 (20) p5476-82, ISSN 0008-5472 Journal Code: 2984705R
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

... of breast cancer reactive monoclonal antibodies directed to the core protein of the human milk mucin .
A mucin molecule, which has a molecular weight of greater than 400,000 and which carries tumor...

... by affinity chromatography followed by passage through a size exclusion column. While treatment of the mucin with hydrogen fluoride for 1 h at 4 degrees C removed the peripheral oligosaccharides, treatment...
... a dominant polypeptide of about 68,000. This appears to be the size of the mucin core protein. Monoclonal antibodies have been developed that react with the stripped and partially stripped molecule but not with the intact mucin . From the initial screening on histological sections one of these antibodies, SM - 3 , reacts with 91% of breast carcinomas but shows little or no reactivity on benign mammary tumors, normal resting, pregnant, or lactating breast. It appears that this monoclonal antibody is reacting with an epitope that is usually masked by oligosaccharide moieties in normal cells...

10/K/21 (Item 1 from file: 35)
DIALOG(R)File 35:Dissertation Abs Online

01284950 ORDER NO: AAD93-12171
ANALYSES OF PP60(C-SRC) AND EPIDERMAL GROWTH FACTOR RECEPTOR PROTEIN TYROSINE KINASES IN A HUMAN COLON ADENOCARCINOMA CELL LINE FOLLOWING INDUCTION OF GOBLET CELL-LIKE CHARACTERISTICS BY TUMOR NECROSIS FACTOR-ALPHA (PP60(C SRC))
Author: NOVOTNY-SMITH, CATHERINE LYNN
Degree: PH.D.
Year: 1992
Corporate Source/Institution: THE UNIV. OF TEXAS H.S.C. AT HOUSTON GRAD. SCH. OF BIOMED. SCI. (2034)
Source: VOLUME 53/12-B OF DISSERTATION ABSTRACTS INTERNATIONAL. PAGE 6090. 295 PAGES

...adenocarcinoma cell line is utilized as an in vitro model system in which to study mucin production. In response to treatment with tumor necrosis factor-alpha, DiFi cells acquire some properties of mucin -producing goblet cells including altered morphology, increased reactivity to wheat germ agglutinin, and increased mucin production as determined by RNA expression as well as reactivity with the MUC-1 antibodies, HMFG-1 and SM - 3 . Thus, TNF-treated DiFi cells represent one of the few in vitro systems in which mucin expression can be induced.
DiFi cells express an activated pp60$\sp{{\rm c}-src},$ as...

...tyrosine phosphorylation of EGF receptor were observed as assessed by immunoblotting with an anti-phosphotyrosine antibody . In addition, ($\sp{125}$I) -EGF cell surface binding was reduced approximately 3-fold

following...

10/K/22 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0013644280 BIOSIS NO.: 200200237791
NMR-based determination of the binding epitope and conformational analysis of MUC-1 glycopeptides and peptides bound to the breast cancer-selective monoclonal antibody SM3
AUTHOR: Moeller Heiko; Serttas Nida; Paulsen Hans; Burchell Joy M; Taylor-Papadimitriou Joyce; Meyer Bernd (Reprint)
AUTHOR ADDRESS: Institute of Organic Chemistry, University of Hamburg, Martin-Luther-King-Platz 6, 20146, Hamburg, Germany**Germany
JOURNAL: European Journal of Biochemistry 269 (5): p1444-1455 March, 2002 2002
MEDIUM: print
ISSN: 0014-2956
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

...conformational analysis of MUC-1 glycopeptides and peptides bound to the breast cancer-selective monoclonal antibody SM3

ABSTRACT: Mucin glycoproteins on breast cancer cells carry shortened carbohydrate chains. These partially deglycosylated mucin 1 (MUC-1) structures are recognized by the monoclonal antibody SM3, which is being tested for its diagnostic utility. We used NMR spectroscopy to analyze the binding mode and the binding epitope of peptide and glycopeptide antigens to the SM3 antibody . The pentapeptide PDTRP and the glycopentapeptide PDT(O-alpha-D-GalNAc)RP are known ligands of the monoclonal antibody . The 3D structures of the ligands in the bound conformation were determined by analyzing trNOESY...

...was found to adopt an extended conformation that fits into the binding pocket of the antibody . The binding epitopes of the ligands were determined by saturation transfer difference (STD) NMR spectroscopy...
DESCRIPTORS:
CHEMICALS & BIOCHEMICALS: MUC-1 mucin glycopeptides...

...3-dimensional structure, binding epitope determination, conformational analysis, tumor expression, tumor selective SM - 3 monoclonal antibody binding...

...MUC-1 mucin peptides...

...3-dimensional structure, binding epitope determination, conformational analysis, tumor expression, tumor selective SM - 3 monoclonal antibody binding

10/K/23 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0011835278 BIOSIS NO.: 199900094938
Evaluation of Pepscan analyses for epitope mapping of anti-MUC1 monoclonal antibodies: A comparative study and review of five antibodies

AUTHOR: Petrakou Eftichia (Reprint); Murray Andrea; Rosamund C; Graves L; Price Michael R
AUTHOR ADDRESS: Cancer Res. Lab., Univ. Nottingham, Nottingham NG7 2RD, UK **UK
JOURNAL: Anticancer Research 18 (6A): p4419-4422 Nov.-Dec., 1998 1998
MEDIUM: print
ISSN: 0250-7005
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: Many murine monoclonal antibodies against MUC1 mucin have been analysed for reactivity against short overlapping peptides with sequences based upon that of...
DESCRIPTORS:
CHEMICALS & BIOCHEMICALS: C-595 anti-MUC-1 monoclonal antibody --...

...DF-3 anti-MUC-1 monoclonal antibody --...

...HMFG-1 anti-MUC-1 monoclonal antibody --...

...Ma-552 anti-MUC-1 monoclonal antibody --...

... SM - 3 anti-MUC-1 monoclonal antibody --

10/K/24 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0009863463 BIOSIS NO.: 199598331296
Access to peptide regions of a surface mucin (MUC1) is reduced by sialic acids
AUTHOR: Ho Jenny J L; Cheng Sandra; Kim Y S
AUTHOR ADDRESS: Gastrointestinal Res. Lab., Veterans Affairs Med. Cent., San Francisco, CA 94121, USA**USA
JOURNAL: Biochemical and Biophysical Research Communications 210 (3): p 866-873 1995 1995
ISSN: 0006-291X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

Access to peptide regions of a surface mucin (MUC1) is reduced by sialic acids

...ABSTRACT: glycoproteins are present on the surfaces of tumor cells. Knowledge of which parts of the mucin molecule are accessible targets for cells of the immune system is important in the development...

...specific for the tripeptide (DTR) in the 20 amino acid tandem repeat of MUC1, and SM - 3 (PDTRP) were greatly enhanced by pre-treating cells with an inhibitor of Oglycosylation, benzyl-alpha...

...with an inhibitor of carbohydrate processing, monensin, also greatly enhanced the reactivities of HMFG-2, SM - 3 and HMFG-1 (PDTR). Thus, sialic acids on termini of neighboring oligosaccharides significantly limit access to the peptide region recognized by antibodies HMFG-1/2 and SM - 3 .
DESCRIPTORS:

MISCELLANEOUS TERMS: ANTIBODY ACCESSIBILITY...

10/K/25 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0008807949 BIOSIS NO.: 199395110215
Multiple forms of intracellular and secreted mucins in a pancreatic cancer cell line
AUTHOR: Ho Jenny J L (Reprint); Bi Ning; Siddiki Bader; Chung Yong-Suk; Yuan Mei; Kim Young S
AUTHOR ADDRESS: GI Research Lab., Veterans Affairs Med. Center, 4150 Clement St., San Francisco, CA 94121, USA**USA
JOURNAL: Cancer Research 53 (4): p884-890 1993
ISSN: 0008-5472
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

...ABSTRACT: of the structures of mucins may assist in the development of new therapeutic approaches. Monoclonal antibody Ea6, developed against mucins purified from xenografts of the pancreatic cancer cell line SW1990, was used to identify a new type of pancreatic cancer mucin . The following characteristics suggest that Ea6 antibody reacts with the core structure of O-linked oligosaccharides, the Tn antigen (N-acetylgalactosamine-serine...
...buoyant densities (1.36 versus 1.44 g/ml) than mucins identified by another monoclonal antibody directed against SW1990 mucins, SPan-1, and were less acidic. High density and molecular mass...

...bond reduction. After partial deglycosylation secreted SPan-1 antigens reacted with MUC1 peptide specific antibodies, SM - 3 and HMFG-2, as well as polyclonal antisera directed against deglycosylated xenograft mucins. However, Ea6...

...prior treatment. No Ea6 reactivity was detected with this fraction. These results suggest that Ea6 antibody identifies a new population of mucins that is distinct from SPan-1 mucins.

10/K/26 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0008305424 BIOSIS NO.: 199294007265
TISSUE-SPECIFIC EXPRESSION OF A HUMAN POLYMORPHIC EPITHELIAL MUCIN MUC1 IN TRANSGENIC MICE
AUTHOR: PEAT N (Reprint); GENDLER S J; LALANI E-N; DUHIG T; TAYLOR-PAPADIMITRIOU J
AUTHOR ADDRESS: IMPERIAL CANCER RES FUND, PO BOX 123, LINCOLN'S INN FIELDS, LONDON WC2A 3PX, ENGLAND, UK**UK
JOURNAL: Cancer Research 52 (7): p1954-1960 1992
ISSN: 0008-5472
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

TISSUE-SPECIFIC EXPRESSION OF A HUMAN POLYMORPHIC EPITHELIAL MUCIN MUC1 IN TRANSGENIC MICE

ABSTRACT: The human MUC1 gene codes for the core protein of a mucin which is expressed by glandular epithelia and the carcinomas which develop from these tissues. The...

...glycosylated in cancers, and some antibodies show specificity in their reactions with the cancer-associated mucin , which also contains epitopes recognized by T-cells from breast and pancreatic cancer patients. For evaluating the potential use of mucin -reactive antibodies and mucin -based immunogens in cancer patients, a mouse model, expressing the MUC1 gene product PEM (polymorphic epithelial mucin) as a self antigen, would be extremely useful. To this end, we have developed transgenic...

...gene, which was very similar to the profile of expression seen in human tissues. The antibody SM - 3 is directed to a core protein epitope, which is selectively exposed in breast cancers and...

...more restricted distribution on normal human tissues. It was established that the distribution of the SM - 3 epitope of PEM in the tissues of the transgenic mice is similar to that seen...

10/K/27 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0008187468 BIOSIS NO.: 199293030359
PURIFICATION AND CHARACTERIZATION OF A MEMBRANE-BOUND AND A SECRETED MUCIN-TYPE GLYCOPROTEIN CARRYING THE CARCINOMA-ASSOCIATED SIALYL-LE-A EPITOPE ON DISTINCT CORE PROTEINS
AUTHOR: BAECKSTROM D (Reprint); HANSSON G C; NILSSON O; JOHANSSON C; GENDLER S J; LINDHOLM L
AUTHOR ADDRESS: DEP MEDICAL BIOCHEMISTRY, UNIVERSITY GOTEBORG, BOX 33031, S-400 33 GOTEBORG, SWED**SWEDEN
JOURNAL: Journal of Biological Chemistry 266 (32): p21537-21547 1991
ISSN: 0021-9258
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

PURIFICATION AND CHARACTERIZATION OF A MEMBRANE-BOUND AND A SECRETED MUCIN -TYPE GLYCOPROTEIN CARRYING THE CARCINOMA-ASSOCIATED SIALYL-LE-A EPITOPE ON DISTINCT CORE PROTEINS

ABSTRACT: Two mucin -type glycoproteins detected by the monoclonal antibody C50, which reacts with the carcinoma-associated sialyl-Lewis a and sialyl-lactotetraose epitopes, were...
...glycoproteins were purified from xenograft extracts and spent culture medium using perchloric acid precipitation, monoclonal antibody affinity purification, ion exchange chromatography, and gel filtration. Both glycoproteins were unaffected by reduction and...

...of the intact glycoproteins showed that both H-CanAg and L-CanAg expressed the monoclonal antibody -defined, sialic acid-containing carbohydrate epitopes CA203 and CA242 as well as the Lewis a...

...terminal part of the MUC1 gene product, core protein of the carcinoma-associated polymorphic epithelial mucin (PEM) and DU-PAN-2, reacted with H-CanAg. After deglycosylation with trifluoromethanesulfonic

acid, H-CanAg but not L-CanAg was recognized by the monoclonal antibodies SM - 3 and HMFG-2, directed to the tandem repeat of the PEM apoprotein. However, these antibodies...

10/K/28 (Item 7 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

0008005973 BIOSIS NO.: 199242108864
EXPRESSION OF THE CORE PROTEIN OF POLYMORPHIC EPITHELIAL MUCIN AS DETECTED BY SM-3 ANTIBODY IN PULMONARY ADENOCARCINOMA AND PLEURAL MALIGNANT MESOTHELIOMA
AUTHOR: SOOHOO W E J (Reprint); ORDONEZ N G
AUTHOR ADDRESS: UNIV TEX MD ANDERSON CANCER CENT, HOUSTON, TEX, USA**USA
JOURNAL: Laboratory Investigation 66 (1): p116A 1992
CONFERENCE/MEETING: 1992 ANNUAL MEETING OF THE UNITED STATES AND CANADIAN ACADEMY OF PATHOLOGY, ATLANTA, GEORGIA, USA, MARCH 14-20, 1992. LAB INVEST.
ISSN: 0023-6837
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

EXPRESSION OF THE CORE PROTEIN OF POLYMORPHIC EPITHELIAL MUCIN AS DETECTED BY SM - 3 ANTIBODY IN PULMONARY ADENOCARCINOMA AND PLEURAL MALIGNANT MESOTHELIOMA

10/K/29 (Item 8 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

0007210549 BIOSIS NO.: 199089128440
THE LOCUS OF THE POLYMORPHIC EPITHELIAL MUCIN PEM TUMOR ANTIGEN ON CHROMOSOME 1Q21 SHOWS A HIGH FREQUENCY OF ALTERATION IN PRIMARY HUMAN BREAST TUMORS
AUTHOR: GENDLER S J (Reprint); COHEN E P; CRASTON A; DUHIG T; JOHNSTONE G; BARNES D
AUTHOR ADDRESS: IMPERIAL CANCER RES FUND, PO BOX 123, LINCOLN'S INN FIELDS, LONDON WC2A 3PX, UK**UK
JOURNAL: International Journal of Cancer 45 (3): p431-435 1990
ISSN: 0020-7136
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

THE LOCUS OF THE POLYMORPHIC EPITHELIAL MUCIN PEM TUMOR ANTIGEN ON CHROMOSOME 1Q21 SHOWS A HIGH FREQUENCY OF ALTERATION IN PRIMARY HUMAN...

...ABSTRACT: were examined for chromosome I loss of heterozygosity using a probe for a polymorphic epithelial mucin , PEM, which is expressed in > 92% of breast carcinomas as well as in normal lactating breast tissue. Expression is detected by the monoclonal antibodies (MAbs) HMFG-1, -2 and SM - 3 which react with epitopes in the 20 amino-acid repeat unit of the core protein...
DESCRIPTORS: BREAST CANCER BREAST CARCINOMA DISEASE PROGRESSION CYTOGENETICS MONOCLONAL ANTIBODY SOUTHERN BLOT ANALYSIS

10/K/30 (Item 9 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

0006736519 BIOSIS NO.: 198988051634
A CORE PROTEIN EPITOPE OF THE POLYMORPHIC EPITHELIAL MUCIN DETECTED BY THE MONOCLONAL ANTIBODY SM-3 IS SELECTIVELY EXPOSED IN A RANGE OF PRIMARY CARCINOMAS
AUTHOR: GIRLING A (Reprint); BARTKOVA J; BURCHELL J; GENDLER S; GILLETT C; TAYLOR-PAPADIMITRIOU J
AUTHOR ADDRESS: IMPERIAL CANCER RES FUND CLINICAL ONCOL UNIT, GUY'S HOSP, LONDON SE1 9RT, UK**UK
JOURNAL: International Journal of Cancer 43 (6): p1072-1076 1989
ISSN: 0020-7136
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

A CORE PROTEIN EPITOPE OF THE POLYMORPHIC EPITHELIAL MUCIN DETECTED BY THE MONOCLONAL ANTIBODY SM - 3 IS SELECTIVELY EXPOSED IN A RANGE OF PRIMARY CARCINOMAS

ABSTRACT: The monoclonal antibody (MAb) SM - 3 , which was raised to chemically deglycosylated milk mucin , reacts with an epitope present on the core protein of this mucin which we have referred to as PEM (polymorphic epithelial mucin). Although this mucin is abundantly expressed by both the lactating breast and breast carcinomas, the antibody SM - 3 shows very little or no reactivity on the former but does react with 92% of breast carcinomas. Furthermore, SM - 3 stains primary carcinomas of the lung, colon and ovary, but on the corresponding normal tissue...

...level or not at all. These results indicate that an epitope masked in the normal mucin is exposed in the mucin produced by tumour cells, perhaps due to aberrant glycosylation. An extensive immunohistochemical study of other normal tissues reveals that the majority show only weak focal staining with SM - 3 or none at all, the distal tubules and collecting ducts of the kidney, and sebaceous...

10/K/31 (Item 10 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0006702079 BIOSIS NO.: 198988017194
PURIFICATION AND BIOCHEMICAL CHARACTERIZATION OF A NOVEL BREAST CARCINOMA ASSOCIATED MUCIN-LIKE GLYCOPROTEIN DEFINED BY ANTIBODY 3E1.2
AUTHOR: STACKER S A (Reprint); TJANDRA J J; XING P-X; WALKER I D; THOMPSON C H; MCKENZIE I F C
AUTHOR ADDRESS: RES CENTRE CANCER AND TRANSPLANTATION, DEP PATHOLOGY, UNIV MELBOURNE, PARKVILLE, 3052 VICTORIA, AUSTRALIA**AUSTRALIA
JOURNAL: British Journal of Cancer 59 (4): p545-553 1989
ISSN: 0007-0920
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

PURIFICATION AND BIOCHEMICAL CHARACTERIZATION OF A NOVEL BREAST CARCINOMA ASSOCIATED MUCIN -LIKE GLYCOPROTEIN DEFINED BY ANTIBODY 3E1.2

...ABSTRACT: from the sera, ascites and breast carcinoma tissue of patients

with breast cancer using monoclonal antibody 3E1.2. The 3E1.2 defined antigen, termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin. The epitope defined by antibody 3E1.2 is sensitive to treatment by sodium periodate and neuraminidase, implying that both carbohydrate and sialic acid are required for binding of antibody 3E1.2. Sandwich immunoassays demonstrated that MSA+ molecules are likely to express repeated 3E1.2...

...glycoprotein. It is suggested that MSA has the same core protein as is recognised by antibody DF3 which has been used to clone the same cDNA as was cloned with antibodies HMEG-1, HMFG-2 and SM - 3 . However, the eptiope detected by the 3E1.2 antibody is either absent or weakly expressed on human milk, human milk-fat globule membrane (HMFGM) or deglycosylated HMFGM- all of which react strongly with various anti-HMFG antibodies. The antibody 3E1.2 thus recognises a unique epitope of the high molecular weight glycoproteins of human...
DESCRIPTORS: HUMAN MAMMARY SERUM ANTIGEN TUMOR-ASSOCIATED ANTIGEN ASCITES BREAST CANCER TISSUE MURINE MONOCLONAL ANTIBODY SANDWICH ELISA

10/K/32 (Item 11 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0006037446 BIOSIS NO.: 198885006337
DEVELOPMENT AND CHARACTERIZATION OF BREAST CANCER REACTIVE MONOCLONAL ANTIBODIES DIRECTED TO THE CORE PROTEIN OF THE HUMAN MILK MUCIN
AUTHOR: BURCHELL J (Reprint); GENDLER S; TAYLOR-PAPADIMITRIOU J; GIRLING A; LEWIS A; MILLIS R; LAMPORT D
AUTHOR ADDRESS: IMPERIAL CANCER RES FUND, PO BOX 123, LINCOLN'S INN FIELDS, LONDON WC2A 3PX, UK**UK
JOURNAL: Cancer Research 47 (20): p5476-5482 1987
ISSN: 0008-5472
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

...OF BREAST CANCER REACTIVE MONOCLONAL ANTIBODIES DIRECTED TO THE CORE PROTEIN OF THE HUMAN MILK MUCIN

ABSTRACT: A mucin molecule, which has a molecular weight of greater than 400,000 and which carries tumor...

...by affinity chromatography followed by passage through a size exclusion column. While treatment of the mucin with hydrogen fluoride for 1 h at 4.degree. C removed the peripheral oligosaccharides, treatment...

...a dominant polypeptide of about 68,000. This appears to be the size of the mucin core protein. Monoclonal antibodies have been developed that react with the stripped and partially stripped molecule but not with the intact mucin . From the initial screening on histological sections one of these antibodies, SM - 3 , reacts with 91% of breast carcinomas but shows little or no reactivity on benign mammary tumors, normal resting, pregnant, or lactating breast. It appears that this monoclonal antibody is reacting with an epitope that is usually masked by oligosaccharide moieties in normal cells...

10/K/33 (Item 12 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0006010260 BIOSIS NO.: 198835107365
EXPRESSION OF A POLYMORPHIC GENE CODING FOR AN EPITHELIAL MUCIN IN BREAST AND OTHER CARCINOMAS
AUTHOR: TAYLOR-PAPADIMITRIOU J (Reprint); GENDLER S J; BURCHELL J
AUTHOR ADDRESS: IMPERIAL CANCER RES FUND, PO BOX 123, LINCOLN'S INN FIELDS, LONDON WC2A 3PX, UK**UK
JOURNAL: Journal of Cellular Biochemistry Supplement (12 PART E): p119 1988
CONFERENCE/MEETING: SYMPOSIUM ON HUMAN TUMOR ANTIGENS AND SPECIFIC TUMOR THERAPY HELD AT THE 17TH ANNUAL UCLA (UNIVERSITY OF CALIFORNIA-LOS ANGELES) SYMPOSIA ON MOLECULAR AND CELLULAR BIOLOGY, KEYSTONE, COLORADO, USA, APRIL 23-30, 1988. J CELL BIOCHEM.
ISSN: 0733-1959
DOCUMENT TYPE: Meeting
RECORD TYPE: Citation
LANGUAGE: ENGLISH

EXPRESSION OF A POLYMORPHIC GENE CODING FOR AN EPITHELIAL MUCIN IN BREAST AND OTHER CARCINOMAS
DESCRIPTORS: ABSTRACT MONOCLONAL ANTIBODY SM - 3 DIAGNOSIS ANTINEOPLASTIC THERAPY

10/K/34 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

07812092 EMBASE No: 1999301656
Expression of core 2 beta-1,6-N-acetylglucosaminyltransferase in a human pancreatic cancer cell line results in altered expression of MUC1 tumor-associated epitopes
Beum P.V.; Singh J.; Burdick M.; Hollingsworth M.A.; Cheng P.-W.
P.-W. Cheng, Dept. of Biochem./Molecular Biology, University of Nebraska Med. Center, 984525 Nebraska Medical Center, Omaha, NE 68198-4525 United States
AUTHOR EMAIL: pcheng@unmc.edu
Journal of Biological Chemistry (J. BIOL. CHEM.) (United States) 27 AUG 1999, 274/35 (24641-24648)
CODEN: JBCHA ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 50

...stable transfection of a human pancreatic adenocarcinoma cell line, Panc1-MUC1, with the cDNA for mucin core 2 GlcNAc-transferase (C2GnT), which creates the core 2 beta-1,6 branch in mucin -type glycans. These cells lack endogenous C2GnT activity but express a recombinant human MUC1 cDNA...
...clones expressing different levels of C2GnT were characterized using monoclonal antibodies CC49, CSLEX-1, and SM - 3 , which recognize tumor-associated epitopes. Increased C2GnT expression led to greatly diminished expression of the...

...transfectants could not bind to selectins. Increased C2GnT expression also led to masking of the SM - 3 peptide epitope, which persisted after the removal of sialic acid, further suggesting greater complexity of...
DRUG DESCRIPTORS:

complementary DNA; mucin ; glycan; monoclonal antibody ; selectin; sialic acid; ligand

10/K/35 (Item 2 from file: 73)
DIALOG(R)File 73:EMBASE

06219800 EMBASE No: 1995248438
Association of sialyl-Lewissup a and sialyl-Lewis(x) with MUC-1 apomucin in a pancreatic cancer cell line
Ho J.J.L.; Siddiki B.; Kim Y.S.
Veterans Administration Medical Ctr., University of California, 4150 Clement Street,San Francisco, CA 94121 United States
Cancer Research (CANCER RES.) (United States) 1995, 55/16 (3659-3663)
CODEN: CNREA ISSN: 0008-5472
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...by neuraminidase greatly enhanced binding of two other MUC1 peptide specific antibodies, HMFG-2 and SM - 3 . After removal of sialic acids, most of the mucins rich in sialyl-Lewissup a and...
DRUG DESCRIPTORS:
* mucin ; *sialic acid
carbohydrate; lectin; monoclonal antibody ; polyclonal antibody ; sialidase
MEDICAL DESCRIPTORS:
antibody specificity; article; cancer cell culture; controlled study; human; human cell; immunoprecipitation; metastasis--complication--co; metastasis...

10/K/36 (Item 3 from file: 73)
DIALOG(R)File 73:EMBASE

06197435 EMBASE No: 1995234936
Access to peptide regions of a surface mucin (MUC1) is reduced by sialic acids
Ho J.J.L.; Cheng S.; Kim Y.S.
Gastrointestinal Research Laboratory, Veterans Affairs Medical Center,San Francisco, CA 94121 United States
Biochemical and Biophysical Research Communications (BIOCHEM. BIOPHYS. RES. COMMUN.) (United States) 1995, 210/3 (866-873)
CODEN: BBRCA ISSN: 0006-291X
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Access to peptide regions of a surface mucin (MUC1) is reduced by sialic acids

...glycoproteins are present on the surfaces of tumor cells. Knowledge of which parts of the mucin molecule are accessible targets for cells of the immune system is important in the development...

...specific for the tripeptide (DTR) in the 20 amino acid tandem repeat of MUC1, and SM - 3 (PDTRP) were greatly enhanced by pre-treating cells with an inhibitor of O-glycosylation, benzyl...

...with an inhibitor of carbohydrate processing, monensin, also greatly

enhanced the reactivities of HMFG-2, SM - 3 and HMFG-1 (PDTR). Thus, sialic acids on termini of neighboring oligosaccharides significantly limit access to the peptide region recognized by antibodies HMFG-1/2 and SM - 3 .
DRUG DESCRIPTORS:
* mucin --endogenous compound--ec; *sialic acid derivative; * sialoglycoprotein
antibody ; cell surface protein--endogenous compound--ec; galactosamine; glycoprotein--endogenous compound--ec; monensin; sialidase

10/K/37 (Item 4 from file: 73)
DIALOG(R)File 73:EMBASE

05309794 EMBASE No: 1993077879
Multiple forms of intracellular and secreted mucins in a pancreatic cancer cell line
Ho J.J.L.; Bi N.; Siddiki B.; Chung Y.-S.; Yuan M.; Kim Y.S.
GI Research Laboratory, Veterans Affairs Medical Center, 4150 Clement Street,San Francisco, CA 94121 United States
Cancer Research (CANCER RES.) (United States) 1993, 53/4 (884-890)
CODEN: CNREA ISSN: 0008-5472
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

...of the structures of mucins may assist in the development of new therapeutic approaches. Monoclonal antibody Ea6, developed against mucins purified from xenografts of the pancreatic cancer cell line SW1990, was used to identify a new type of pancreatic cancer mucin . The following characteristics suggest that Ea6 antibody reacts with the core structure of O-linked oligosaccharides, the Tn antigen (N- acetylgalactosamine-serine ...

...buoyant densities (1.36 versus 1.44 g/ml) than mucins identified by another monoclonal antibody directed against SW1990 mucins, SPan-1, and were less acidic. High density and molecular mass...

...bond reduction. After partial deglycosylation secreted SPan-1 antigens reacted with MUC1 peptide specific antibodies, SM - 3 and HMFG-2, as well as polyclonal antisera directed against deglycosylated xenograft mucins. However, Ea6...

...prior treatment. No Ea6 reactivity was detected with this fraction. These results suggest that Ea6 antibody identifies a new population of mucins that is distinct from SPan-1 mucins.
DRUG DESCRIPTORS:
* mucin --endogenous compound--ec
MEDICAL DESCRIPTORS:
antibody specificity; article; carcinogenicity; cell density; cell secretion; cell size; cell subpopulation; controlled study; human; human...

10/K/38 (Item 5 from file: 73)
DIALOG(R)File 73:EMBASE

05038967 EMBASE No: 1992179183
Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice

Peat N.; Gendler S.J.; Lalani E.-N.; Duhig T.; Taylor-Papadimitriou J.
Imperial Cancer Research Fund, P. O. Box 123,Lincoln's Inn Flds., London WC2A 3PX United Kingdom
Cancer Research (CANCER RES.) (United States) 1992, 52/7 (1954-1960)
CODEN: CNREA ISSN: 0008-5472
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice

The human MUC1 gene codes for the core protein of a mucin which is expressed by glandular epithelia and the carcinomas which develop from these tissues. The...

...glycosylated in cancers, and some antibodies show specificity in their reactions with the cancer-associated mucin , which also contains epitopes recognized by T-cells from breast and pancreatic cancer patients. For evaluating the potential use of mucin - reactive antibodies and mucin -based immunogens in cancer patients, a mouse model, expressing the MUC1 gene product PEM (polymorphic epithelial mucin) as a self antigen, would be extremely useful. To this end, we have developed transgenic...

...gene, which was very similar to the profile of expression seen in human tissues. The antibody SM - 3 is directed to a core protein epitope, which is selectively exposed in breast cancers and...

...more restricted distribution on normal human tissues. It was established that the distribution of the SM - 3 epitope of PEM in the tissues of the transgenic mice is similar to that seen...
DRUG DESCRIPTORS:
*gene product; * mucin

10/K/39 (Item 6 from file: 73)
DIALOG(R)File 73:EMBASE

04895735 EMBASE No: 1992035950
Purification and characterization of a membrane-bound and a secreted mucin-type glycoprotein carrying the carcinoma-associated sialyl-Lesup a epitope on distinct core proteins
Baeckstrom D.; Hansson G.C.; Nilsson O.; Johansson C.; Gendler S.J.; Lindholm L.
Department of Medical Biochem., University of Goteborg, Box 33031,S-400 33 Goteborg Sweden
Journal of Biological Chemistry (J. BIOL. CHEM.) (United States) 1991, 266/32 (21537-21547)
CODEN: JBCHA ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Purification and characterization of a membrane-bound and a secreted mucin -type glycoprotein carrying the carcinoma-associated sialyl-Lesup a epitope on distinct core proteins

Two mucin -type glycoproteins detected by the monoclonal antibody C50, which reacts with the carcinoma-associated sialyl-Lewis a and sialyl-lactotetraose epitopes, were...
...glycoproteins were purified from xenograft extracts and spent culture

medium using perchloric acid precipitation, monoclonal antibody affinity purification, ion exchange chromatography, and gel filtration. Both glycoproteins were unaffected by reduction and...

...of the intact glycoproteins showed that both H-CanAg and L-CanAg expressed the monoclonal antibody -defined, sialic acid-containing carbohydrate epitopes CA203 and CA242 as well as the Lewis a...

...terminal part of the MUC1 gene product, core protein of the carcinoma-associated polymorphic epithelial mucin (PEM) and DU-PAN-2, reacted with H-CanAg. After deglycosylation with trifluoromethanesulfonic acid, H-CanAg but not L-CanAg was recognized by the monoclonal antibodies SM - 3 and HMFG-2, directed to the tandem repeat of the PEM apoprotein. However, these antibodies...
DRUG DESCRIPTORS:
*epitope; *glycoprotein--endogenous compound--ec; * mucin --endogenous compound--ec; *sialic acid--endogenous compound--ec

10/K/40 (Item 7 from file: 73)
DIALOG(R)File 73:EMBASE

03989086 EMBASE No: 1989158082
A core protein epitope of the polymorphic epithelial mucin detected by the monoclonal antibody SM-3 is selectively exposed in a range of primary carcinomas
Girling A.; Bartkova J.; Burchell J.; Gendler S.; Gillett C.; Taylor-Paradimitriou J.
Imperial Cancer Research Fund Clinical Oncology Unit, Guy's Hospital, London SE1 9RT United Kingdom
International Journal of Cancer (INT. J. CANCER) (United States) 1989 , 43/6 (1072-1076)
CODEN: IJCNA ISSN: 0020-7136
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

A core protein epitope of the polymorphic epithelial mucin detected by the monoclonal antibody SM - 3 is selectively exposed in a range of primary carcinomas

The monoclonal antibody (MAb) SM - 3 , which was raised to chemically deglycosylated milk mucin , reacts with an epitope present on the core protein of this mucin which we have referred to as PEM (polymorphic epithelial mucin). Although this mucin is abundantly expressed by both the lactating breast and breast carcinomas, the antibody SM - 3 shows very little or no reactivity on the former but does react with 92% of breast carcinomas. Furthermore, SM - 3 stains primary carcinomas of the lung, colon and ovary, but on the corresponding normal tissue...

...level or not at all. These results indicate that an epitope masked in the normal mucin is exposed in the mucin produced by tumour cells, perhaps due to aberrant glycosylation. An extensive immunohistochemical study of other normal tissues reveals that the majority show only weak focal staining with SM - 3 or none at all, the distal tubules and collecting ducts of the kidney, and sebaceous...
DRUG DESCRIPTORS:
*monoclonal antibody ; * mucin

10/K/41 (Item 8 from file: 73)
DIALOG(R)File 73:EMBASE

03942790 EMBASE No: 1989111783
Purification and biochemical characterisation of a novel breast carcinoma associated mucin-like glycoprotein defined by antibody 3E1.2
Stacker S.A.; Tjandra J.J.; Xing P.-X.; Walker I.D.; Thompson C.H.; McKenzie I.F.C.
Research Center for Cancer and Transplantation, Department of Pathology, University of Melbourne, Parkville, Vic. 3052 Australia
British Journal of Cancer (BR. J. CANCER) (United Kingdom) 1989, 59/4 (544-553)
CODEN: BJCAA ISSN: 0007-0920
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Purification and biochemical characterisation of a novel breast carcinoma associated mucin -like glycoprotein defined by antibody 3E1.2

...from the sera, ascites and breast carcinoma tissue of patients with breast cancer using monoclonal antibody 3E1.2. The 3E1.2 defined antigen, termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin. The epitope defined by antibody 3E1.2 is sensitive to treatment by sodium periodate and neuraminidase, implying that both carbohydrate and sialic acid are required for binding of antibody 3E1.2. Sandwich immunoassays demonstrated that MSAsup + molecules are likely to express repeated 3E1.2 ...

...glycoprotein. It is suggested that MSA has the same core protein as is recognised by antibody DF3 which has been used to clone the same cDNA as was cloned with antibodies HMFG-1, HMFG-2 and SM - 3 . However, the epitope detected by the 3E1.2 antibody is either absent or weakly expressed on human milk, human milk-fat globule membrane (HMFGM) or deglycosylated HMFGM - all of which react strongly with various anti-HMFG antibodies. The antibody 3E1.2 thus recognises a unique epitope of the high molecular weight glycoproteins of human...
DRUG DESCRIPTORS:
milk; monoclonal antibody

10/K/42 (Item 9 from file: 73)
DIALOG(R)File 73:EMBASE

03467885 EMBASE No: 1987220466
Development and characterization of breast cancer reactive monoclonal antibodies directed to the core protein of the human milk mucin
Burchell J.; Gendler S.; Taylor-Papadimitriou J.; Girling A.; Lewis A.; Millis R.; Lamport D.
Imperial Cancer Research Fund, London WC2A 3PX United Kingdom
Cancer Research (CANCER RES.) (United States) 1987, 47/20 (5476-5482)
CODEN: CNREA ISSN: 0008-5472
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH

...of breast cancer reactive monoclonal antibodies directed to the core protein of the human milk mucin

A mucin molecule, which has a molecular weight of greater than 400,000 and which carries tumor...

...by affinity chromatography followed by passage through a size exclusion column. While treatment of the mucin with hydrogen fluoride for 1 h at 4degreeC removed the peripheral oligosaccharides, treatment with HF...
...a dominant polypeptide of about 68,000. This appears to be the size of the mucin core protein. Monoclonal antibodies have been developed that react with the stripped and partially stripped molecule but not with the intact mucin . From the initial screening on histological sections one of these antibodies, SM - 3 , reacts with 91% of breast carcinomas but shows little or no reactivity on benign mammary tumors, normal resting, pregnant, or lactating breast. It appears that this monoclonal antibody is reacting with an epitope that is usually masked by oligosaccharide moieties in normal cells...
DRUG DESCRIPTORS:
*tumor antigen; *monoclonal antibody ; * mucin ; *tumor marker

10/K/43 (Item 1 from file: 434)
DIALOG(R)File 434:SciSearch(R) Cited Ref Sci

09547976 Genuine Article#: AA845 No. References: 21
Title: A CORE PROTEIN EPITOPE OF THE POLYMORPHIC EPITHELIAL MUCIN DETECTED BY THE MONOCLONAL-ANTIBODY SM-3 IS SELECTIVELY EXPOSED IN A RANGE OF PRIMARY CARCINOMAS
Author(s): GIRLING A; BARTKOVA J; BURCHELL J; GENDLER S; GILLETT C; TAYLORPAPADIMITRIOU J
Corporate Source: GUYS HOSP,IMPERIAL CANC RES FUND,SOCIAL MED UNIT/LONDON SE1 9RT//ENGLAND/; IMPERIAL CANC RES FUND/LONDON WC2A 3PX//ENGLAND/; RES INST CLIN & EXPTL ONCOL/CS-65601 BRNO//CZECHOSLOVAKIA/
Journal: INTERNATIONAL JOURNAL OF CANCER, 1989, V43, N6, P1072-1076
Language: ENGLISH Document Type: ARTICLE

Title: A CORE PROTEIN EPITOPE OF THE POLYMORPHIC EPITHELIAL MUCIN DETECTED BY THE MONOCLONAL- ANTIBODY SM - 3 IS SELECTIVELY EXPOSED IN A RANGE OF PRIMARY CARCINOMAS

10/K/44 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04197721 Genuine Article#: RN654 No. References: 43
Title: ASSOCIATION OF SIALYL-LEWIS(A) AND SIALYL-LEWIS(X) WITH MUC-1 APOMUCIN IN A PANCREATIC-CANCER CELL-LINE
Author(s): HO JJL; SIDDIKI B; KIM YS
Corporate Source: UNIV CALIF SAN FRANCISCO,VET ADM MED CTR,4150 CLEMENT ST 151M2/SAN FRANCISCO//CA/94121; UNIV CALIF SAN FRANCISCO,VET AFFAIRS MED CTR,GASTROINTESTINAL RES LAB 151M2/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT MED/SAN FRANCISCO//CA/94143
Journal: CANCER RESEARCH, 1995, V55, N16 (AUG 15), P3659-3663
ISSN: 0008-5472
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: by neuraminidase greatly enhanced binding of two other MUC1 peptide specific antibodies, HMFG-2 and SM - 3 . After removal of sialic acids, most of the mucins rich in sialyl-Lewis(a) and...

...Identifiers--POLYMORPHIC EPITHELIAL MUCIN ; COLON-CARCINOMA CELLS; MONOCLONAL- ANTIBODY ; ADENOCARCINOMA RECOGNIZE; CORE PROTEINS; T-CELLS; EXPRESSION; ANTIGEN; BREAST; EPITOPE

10/K/45 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

04084050 Genuine Article#: RA221 No. References: 36

Title: ACCESS TO PEPTIDE REGIONS OF A SURFACE MUCIN (MUC1) IS REDUCED BY SIALIC ACIDS

Author(s): HO JJL; CHENG S; KIM YS
Corporate Source: VET AFFAIRS MED CTR,GASTROINTESTINAL RES LAB 151M2/SAN FRANCISCO//CA/94121; UNIV CALIF SAN FRANCISCO,DEPT MED/SAN FRANCISCO//CA/00000

Journal: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, 1995, V210, N3 (MAY 25), P866-873
ISSN: 0006-291X
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Title: ACCESS TO PEPTIDE REGIONS OF A SURFACE MUCIN (MUC1) IS REDUCED BY SIALIC ACIDS

...Abstract: glycoproteins are present on the surfaces of tumor cells. Knowledge of which parts of the mucin molecule are accessible targets for cells of the immune system is important in the development...

...specific for the tripeptide (DTR) in the 20 amino acid tandem repeat of MUC1, and SM - 3 (PDTRP) were greatly enhanced by pre-treating cells with an inhibitor of O-glycosylation, benzyl...
...with an inhibitor of carbohydrate processing, monensin, also greatly enhanced the reactivities of HMFG-2, SM - 3 and HMFG-1 (PDTR). Thus, sialic acids on termini of neighboring oligosaccharides significantly limit access to the peptide region recognized by antibodies HMFG-1/2 and SM - 3 . (C) Academic Press, Inc.
...Identifiers--POLYMORPHIC EPITHELIAL MUCIN ; MONOCLONAL- ANTIBODY ; ADENOCARCINOMA RECOGNIZE; T-CELLS; CORE; ANTIGEN; EPISIALIN; ADHESION; EPITOPE; BREAST

10/K/46 (Item 3 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

02233281 Genuine Article#: KL963 No. References: 41

Title: MULTIPLE FORMS OF INTRACELLULAR AND SECRETED MUCINS IN A PANCREATIC-CANCER CELL-LINE

Author(s): HO JJL; BI N; SIDDIKI B; CHUNG YS; YUAN M; KIM YS
Corporate Source: VET AFFAIRS MED CTR,GI RES LAB 151M2,4150 CLEMENT ST/SAN FRANCISCO//CA/94121; UNIV CALIF SAN FRANCISCO,DEPT 22J/SAN FRANCISCO//CA/94121; OSAKA CITY UNIV,SCH MED,DEPT SURG 1/OSAKA 545//JAPAN/

Journal: CANCER RESEARCH, 1993, V53, N4 (FEB 15), P884-890
ISSN: 0008-5472
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: of the structures of mucins may assist in the development of new therapeutic approaches. Monoclonal antibody Ea6, developed against mucins purified from xenografts of the pancreatic cancer cell line SW1990, was used to identify a new type of pancreatic cancer

mucin . The following characteristics suggest that Ea6 antibody reacts with the core structure of O-linked oligosaccharides, the Tn antigen (N-acetylgalactosamine-serine...

...buoyant densities (1.36 versus 1.44 g/ml) than mucins identified by another monoclonal antibody directed against SW1990 mucins, SPan-1, and were less acidic. High density and molecular mass...

...bond reduction. After partial deglycosylation secreted SPan-1 antigens reacted with MUC1 peptide specific antibodies, SM - 3 and HMFG-2, as well as polyclonal antisera directed against deglycosylated xenograft mucins. However, Ea6...

...prior treatment. No Ea6 reactivity was detected with this fraction. These results suggest that Ea6 antibody identifies a new population of mucins that is distinct from SPan-1 mucins.
...Identifiers--MURINE MONOCLONAL-ANTIBODIES; ADENOCARCINOMA CELLS; SUBMAXILLARY MUCIN ; MOLECULAR-CLONING; GLYCOPROTEIN; PURIFICATION; ANTIGEN; GENE; OLIGOSACCHARIDES; SIALOMUCIN
Research Fronts: 91-2924 001 (HUMAN POLYMORPHIC EPITHELIAL MUCIN GENE; SERUM MARKERS IN BREAST-CANCER; ANTIGEN EXPRESSION)
91-4134 001 (LEWIS BLOOD-GROUP ANTIGENS; ORAL SQUAMOUS-CELL CARCINOMAS; PANCREAS CANCER)
91-4226 001 (I-131 B72.3 MONOCLONAL- ANTIBODY ; SERUM TUMOR-ASSOCIATED GLYCOPROTEIN-72; PANCREATIC ADENOCARCINOMA; INVITRO CLINICAL-APPLICATIONS)

10/K/47 (Item 4 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01611489 Genuine Article#: HL505 No. References: 38
Title: TISSUE-SPECIFIC EXPRESSION OF A HUMAN POLYMORPHIC EPITHELIAL MUCIN (MUC1) IN TRANSGENIC MICE
Author(s): PEAT N; GENDLER SJ; LALANI EN; DUHIG T; TAYLORPAPADIMITRIOU J
Corporate Source: IMPERIAL CANC RES FUND,POB 123,LINCOLNS INN FIELDS/LONDON WC2A 3PX//ENGLAND/; IMPERIAL CANC RES FUND,POB 123,LINCOLNS INN FIELDS/LONDON WC2A 3PX//ENGLAND/
Journal: CANCER RESEARCH, 1992, V52, N7 (APR 1), P1954-1960
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Title: TISSUE-SPECIFIC EXPRESSION OF A HUMAN POLYMORPHIC EPITHELIAL MUCIN (MUC1) IN TRANSGENIC MICE
Abstract: The human MUC1 gene codes for the core protein of a mucin which is expressed by glandular epithelia and the carcinomas which develop from these tissues. The...

...glycosylated in cancers, and some antibodies show specificity in their reactions with the cancer-associated mucin , which also contains epitopes recognized by T-cells from breast and pancreatic cancer patients. For evaluating the potential use of mucin -reactive antibodies and mucin -based immunogens in cancer patients, a mouse model, expressing the MUC1 gene product PEM (polymorphic epithelial mucin) as a self antigen, would be extremely useful. To this end, we have developed transgenic...

...gene, which was very similar to the profile of expression seen in human tissues. The antibody SM - 3 is directed to a core protein epitope, which is selectively exposed in breast cancers and...

...more restricted distribution on normal human tissues. It was established that the distribution of the SM - 3 epitope of PEM in the tissues of the transgenic mice is similar to that seen...
Research Fronts: 90-3502 004 (PROTEIN CORE OF HUMAN POLYMORPHIC EPITHELIAL MUCIN ; MARKERS FOR BREAST-CANCER; OVARIAN CARCINOMA-ASSOCIATED SEBACEOUS GLAND ANTIGEN)
90-1469 001 (DIFFERENTIAL EXPRESSION...

10/K/48 (Item 5 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01480063 Genuine Article#: HC030 No. References: 35
Title: CHARACTERIZATION OF EPITHELIAL PHENOTYPES IN MORTAL AND IMMORTAL HUMAN BREAST CELLS
Author(s): PAINE TM; SOULE HD; PAULEY RJ; DAWSON PJ
Corporate Source: MICHIGAN CANC FDN,110 E WARREN AVE/DETROIT//MI/48201; MICHIGAN CANC FDN,110 E WARREN AVE/DETROIT//MI/48201; UNIV S FLORIDA,MED LAB/TAMPA//FL/33612; UNIV S FLORIDA,DEPT PATHOL/TAMPA//FL/33612
Journal: INTERNATIONAL JOURNAL OF CANCER, 1992, V50, N3 (FEB 1), P463-473
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: 2-dimensional gel Western blots and immunoperoxidase staining with antibodies to cytokeratins and polymorphic epithelial mucin . MCF-10M and MCF-12M retain the cytokeratin profile of the luminal cell (7, 8...

...the morphologically mixed, less-selected population of MCF-10-2. Epitopes on the polymorphic epithelial mucin , recognized by antibodies HMFG 1, HMFG 2 and SM - 3 , were detected in the mortal cultures and in the immortal lines, indicating the occurrence of both normal and abnormal mucin processing. MCF-10, MCF-10-2 and MCF-12 cells do not form tumors in...
...Identifiers--MONOCLONAL- ANTIBODY ; KERATIN EXPRESSION; DNA; DIFFERENTIATION; MARKERS; GROWTH; HMFG-2; MCF-10; MUCIN; LINE
Research Fronts: 90-3502 002 (PROTEIN CORE OF HUMAN POLYMORPHIC EPITHELIAL MUCIN ; MARKERS FOR BREAST-CANCER; OVARIAN CARCINOMA-ASSOCIATED SEBACEOUS GLAND ANTIGEN)
90-4331 002 (KERATIN EXPRESSION...

10/K/49 (Item 6 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01458157 Genuine Article#: HA276 No. References: 0
Title: EXPRESSION OF THE CORE PROTEIN OF POLYMORPHIC EPITHELIAL MUCIN AS DETECTED BY SM-3 ANTIBODY IN PULMONARY ADENOCARCINOMA AND PLEURAL MALIGNANT MESOTHELIOMA
Author(s): SOOHOO WEJ; ORDONEZ NG
Corporate Source: UNIV TEXAS,MD ANDERSON CANC CTR/HOUSTON//TX/77025
Journal: LABORATORY INVESTIGATION, 1992, V66, N1 (JAN), PA116
Language: ENGLISH Document Type: MEETING ABSTRACT

Title: EXPRESSION OF THE CORE PROTEIN OF POLYMORPHIC EPITHELIAL MUCIN AS DETECTED BY SM - 3 ANTIBODY IN PULMONARY ADENOCARCINOMA AND PLEURAL MALIGNANT MESOTHELIOMA

10/K/50 (Item 7 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01328314 Genuine Article#: GP804 No. References: 44
Title: PURIFICATION AND CHARACTERIZATION OF A MEMBRANE-BOUND AND A SECRETED MUCIN-TYPE GLYCOPROTEIN CARRYING THE CARCINOMA-ASSOCIATED SIALYL-LE(A) EPITOPE ON DISTINCT CORE PROTEINS
Author(s): BAECKSTROM D; HANSSON GC; NILSSON O; JOHANSSON C; GENDLER SJ; LINDHOLM L
Corporate Source: GOTHENBURG UNIV,DEPT MED BIOCHEM,BOX 33031/S-40033 GOTHENBURG//SWEDEN/; PHARMACIA CANAG/S-40242 GOTHENBURG//SWEDEN/; DEPT MED MICROBIOL & IMMUNOL/S-41346 GOTHENBURG//SWEDEN/; IMPERIAL CANC RES FUND/LONDON WC2A 3PX//ENGLAND/
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N32, P21537-21547
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

Title: PURIFICATION AND CHARACTERIZATION OF A MEMBRANE-BOUND AND A SECRETED MUCIN -TYPE GLYCOPROTEIN CARRYING THE CARCINOMA-ASSOCIATED SIALYL-LE(A) EPITOPE ON DISTINCT CORE PROTEINS
Abstract: Two mucin -type glycoproteins detected by the monoclonal antibody C50, which reacts with the carcinoma-associated sialyl-Lewis a and sialyl-lactotetraose epitopes, were...

...glycoproteins were purified from xenograft extracts and spent culture medium using perchloric acid precipitation, monoclonal antibody affinity purification, ion exchange chromatography, and gel filtration. Both glycoproteins were unaffected by reduction and...

...of the intact glycoproteins showed that both H-CanAg and L-CanAg expressed the monoclonal antibody -defined, sialic acid-containing carbohydrate epitopes CA2O3 and CA242 as well as the Lewis a...

...terminal part of the MUC1 gene product, core protein of the carcinoma-associated Polymorphic epithelial mucin (PEM) and DU-PAN-2, reacted with H-CanAg. After deglycosylation with trifluoromethanesulfonic acid, H-CanAg but not L-CanAg was recognized by the monoclonal antibodies SM - 3 and HMFG-2, directed to the tandem repeat of the PEM apoprotein. However, these antibodies...
...Identifiers--POLYMORPHIC EPITHELIAL MUCIN ; N-FUCOPENTAOSE-II; MONOCLONAL-ANTIBODIES; HUMAN-MILK; CANCER; ANTIGEN; GANGLIOSIDES; EXPRESSION; ADENOCARCINOMA; BIOSYNTHESIS
...Research Fronts: HUMAN MYELOID CELLS; CARBOHYDRATE ANTIGENS; DIFFERENT GRADES OF TRANSFORMATION)
89-1356 001 (CARCINOEMBRYONIC ANTIGEN; MONOCLONAL- ANTIBODY B72.3; TUMOR-ASSOCIATED GLYCOPROTEIN (TAG-72) EXPRESSION; HUMAN-COLON CARCINOMA; MALIGNANT PANCREATIC LESIONS)
89...
?

Set	Items	Description
S1	27	(POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2	43	(EPITHELIAL (W) MUCIN) AND CLONE
S3	0	S1 AND SM-3
S4	0	S2 AND SM-3
S5	1	(S1 AND (SM (W) 3))
S6	1	S2 AND (SM (W) 3)

```
S7     1765000   (SM  (W) 3) AND MONOCLONAL OR ANTIBODY
S8     1765000   ((SM (W) 3) AND MONOCLONAL OR ANTIBODY)
S9          88   ((SM (W) 3) AND ANTIBODY)
S10         50   S9 AND MUCIN
S11     305313   (S10 AND GENE OR CLONE)
S12          4   (S10 AND CLONE)
S13          7   (S10 AND DNA)
?

TYPE S12/MEDIUM,K/1-4

  12/K/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

08050539   PMID: 2469454
 Purification and biochemical characterisation of a novel breast carcinoma
 associated mucin-like glycoprotein defined by antibody 3E1.2.
  Stacker  S A; Tjandra J J; Xing P X; Walker I D; Thompson C H; McKenzie I
F
  Department of Pathology, University of Melbourne, Victoria, Australia.
  British  journal of cancer (ENGLAND)   Apr 1989,  59  (4)  p544-53,  ISSN
0007-0920--Print   Journal Code: 0370635
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed

 Purification and biochemical characterisation of a novel breast carcinoma
 associated  mucin -like glycoprotein defined by  antibody  3E1.2.
  ... from  the  sera, ascites and breast carcinoma tissue of patients with
breast cancer using monoclonal  antibody  3E1.2. The 3E1.2 defined antigen,
termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin.
The epitope defined by  antibody  3E1.2 is sensitive to treatment by sodium
periodate  and  neuraminidase,  implying  that both carbohydrate and sialic
acid  are  required  for binding of  antibody  3E1.2. Sandwich immunoassays
demonstrated that MSA+ molecules are likely to express repeated 3E1.2...

... glycoprotein.  It is suggested that MSA has the same core protein as is
recognised  by  antibody  DF3 which has been used to  clone  the same cDNA
as  was  cloned  with  antibodies HMFG-1, HMFG-2 and  SM - 3 . However, the
epitope  detected  by  the  3E1.2  antibody  is  either  absent or weakly
expressed  on  human  milk,  human  milk-fat  globule  membrane  (HMFGM) or
deglycosylated  HMFGM--all  of  which react strongly with various anti-HMFG
antibodies.  The  antibody  3E1.2 thus recognises a unique epitope of the
high molecular weight glycoproteins of human...


  12/K/2     (Item 1 from file: 159)
DIALOG(R)File 159:Cancerlit
(c) format only 2002 Dialog. All rts. reserv.

01728393 89228880  PMID: 2469454
 Purification and biochemical characterisation of a novel breast carcinoma
 associated mucin-like glycoprotein defined by antibody 3E1.2.
  Stacker  S A; Tjandra J J; Xing P X; Walker I D; Thompson C H; McKenzie I
F
```

Department of Pathology, University of Melbourne, Victoria, Australia.
Br J Cancer (ENGLAND) Apr 1989, 59 (4) p544-53, ISSN 0007-0920
Journal Code: 0370635
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Purification and biochemical characterisation of a novel breast carcinoma associated mucin -like glycoprotein defined by antibody 3E1.2.

... from the sera, ascites and breast carcinoma tissue of patients with breast cancer using monoclonal antibody 3E1.2. The 3E1.2 defined antigen, termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin. The epitope defined by antibody 3E1.2 is sensitive to treatment by sodium periodate and neuraminidase, implying that both carbohydrate and sialic acid are required for binding of antibody 3E1.2. Sandwich immunoassays demonstrated that MSA+ molecules are likely to express repeated 3E1.2...

... glycoprotein. It is suggested that MSA has the same core protein as is recognised by antibody DF3 which has been used to clone the same cDNA as was cloned with antibodies HMFG-1, HMFG-2 and SM - 3 . However, the epitope detected by the 3E1.2 antibody is either absent or weakly expressed on human milk, human milk-fat globule membrane (HMFGM) or deglycosylated HMFGM--all of which react strongly with various anti-HMFG antibodies. The antibody 3E1.2 thus recognises a unique epitope of the high molecular weight glycoproteins of human...

12/K/3 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

0006702079 BIOSIS NO.: 198988017194
PURIFICATION AND BIOCHEMICAL CHARACTERIZATION OF A NOVEL BREAST CARCINOMA ASSOCIATED MUCIN-LIKE GLYCOPROTEIN DEFINED BY ANTIBODY 3E1.2
AUTHOR: STACKER S A (Reprint); TJANDRA J J; XING P-X; WALKER I D; THOMPSON C H; MCKENZIE I F C
AUTHOR ADDRESS: RES CENTRE CANCER AND TRANSPLANTATION, DEP PATHOLOGY, UNIV MELBOURNE, PARKVILLE, 3052 VICTORIA, AUSTRALIA**AUSTRALIA
JOURNAL: British Journal of Cancer 59 (4): p545-553 1989
ISSN: 0007-0920
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

PURIFICATION AND BIOCHEMICAL CHARACTERIZATION OF A NOVEL BREAST CARCINOMA ASSOCIATED MUCIN -LIKE GLYCOPROTEIN DEFINED BY ANTIBODY 3E1.2

...ABSTRACT: from the sera, ascites and breast carcinoma tissue of patients with breast cancer using monoclonal antibody 3E1.2. The 3E1.2 defined antigen, termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin. The epitope defined by antibody 3E1.2 is sensitive to treatment by sodium periodate and neuraminidase, implying that both carbohydrate and sialic acid are required for binding of antibody 3E1.2. Sandwich immunoassays demonstrated that MSA+ molecules are likely to express repeated 3E1.2...

...glycoprotein. It is suggested that MSA has the same core protein as is recognised by antibody DF3 which has been used to clone the same cDNA as was cloned with antibodies HMEG-1, HMFG-2 and SM - 3 . However, the eptiope detected by the 3E1.2 antibody is either absent or weakly expressed on human milk, human milk-fat globule membrane (HMFGM) or deglycosylated HMFGM- all of which react strongly with various anti-HMFG antibodies. The antibody 3E1.2 thus recognises a unique epitope of the high molecular weight glycoproteins of human...
DESCRIPTORS: HUMAN MAMMARY SERUM ANTIGEN TUMOR-ASSOCIATED ANTIGEN ASCITES BREAST CANCER TISSUE MURINE MONOCLONAL ANTIBODY SANDWICH ELISA

12/K/4 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE

03942790 EMBASE No: 1989111783
Purification and biochemical characterisation of a novel breast carcinoma associated mucin-like glycoprotein defined by antibody 3E1.2
Stacker S.A.; Tjandra J.J.; Xing P.-X.; Walker I.D.; Thompson C.H.; McKenzie I.F.C.
Research Center for Cancer and Transplantation, Department of Pathology, University of Melbourne, Parkville, Vic. 3052 Australia
British Journal of Cancer (BR. J. CANCER) (United Kingdom) 1989, 59/4 (544-553)
CODEN: BJCAA ISSN: 0007-0920
DOCUMENT TYPE: Journal
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH

Purification and biochemical characterisation of a novel breast carcinoma associated mucin -like glycoprotein defined by antibody 3E1.2

...from the sera, ascites and breast carcinoma tissue of patients with breast cancer using monoclonal antibody 3E1.2. The 3E1.2 defined antigen, termed mammary serum antigen (MSA) was obtained by...

...acetyl glucosamine as indicated by its binding to wheat-germ agglutinin. The epitope defined by antibody 3E1.2 is sensitive to treatment by sodium periodate and neuraminidase, implying that both carbohydrate and sialic acid are required for binding of antibody 3E1.2. Sandwich immunoassays demonstrated that MSAsup + molecules are likely to express repeated 3E1.2 ...

...glycoprotein. It is suggested that MSA has the same core protein as is recognised by antibody DF3 which has been used to clone the same cDNA as was cloned with antibodies HMFG-1, HMFG-2 and SM - 3 . However, the epitope detected by the 3E1.2 antibody is either absent or weakly expressed on human milk, human milk-fat globule membrane (HMFGM) or deglycosylated HMFGM - all of which react strongly with various anti-HMFG antibodies. The antibody 3E1.2 thus recognises a unique epitope of the high molecular weight glycoproteins of human...
DRUG DESCRIPTORS:
milk; monoclonal antibody
?

Set	Items	Description
S1	27	(POLYMORPHIC (N) EPITHELIAL (N) MUCIN) AND CLONE
S2	43	(EPITHELIAL (W) MUCIN) AND CLONE

```
S3           0   S1 AND SM-3
S4           0   S2 AND SM-3
S5           1   (S1 AND (SM (W) 3))
S6           1   S2 AND (SM (W) 3)
S7     1765000   (SM  (W) 3) AND MONOCLONAL OR ANTIBODY
S8     1765000   ((SM (W) 3) AND MONOCLONAL OR ANTIBODY)
S9          88   ((SM (W) 3) AND ANTIBODY)
S10         50   S9 AND MUCIN
S11     305313   (S10 AND GENE OR CLONE)
S12          4   (S10 AND CLONE)
S13          7   (S10 AND DNA)
?

TYPE S13/MEDIUM,K/1-7

  13/K/1     (Item 1 from file: 155)
DIALOG(R)File 155:MEDLINE(R)
(c) format only 2006 Dialog. All rts. reserv.

09186073   PMID: 1372533
 Tissue-specific expression of a human polymorphic epithelial mucin (MUC1)
 in transgenic mice.
  Peat N; Gendler S J; Lalani N; Duhig T; Taylor-Papadimitriou J
  Imperial Cancer Research Fund, Lincoln's Inn Fields, London, England.
  Cancer research (UNITED STATES)  Apr 1 1992,  52 (7) p1954-60,  ISSN
0008-5472--Print  Journal Code: 2984705R
  Publishing Model Print
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: MEDLINE; Completed

  Tissue-specific expression of a human polymorphic epithelial mucin
  (MUC1) in transgenic mice.
  The human MUC1 gene codes for the core protein of a mucin which is
expressed by glandular epithelia and the carcinomas which develop from
these tissues. The...

... glycosylated in cancers, and some antibodies show specificity in their
reactions with the cancer-associated mucin , which also contains epitopes
recognized by T-cells from breast and pancreatic cancer patients. For
evaluating the potential use of mucin -reactive antibodies and mucin
-based immunogens in cancer patients, a mouse model, expressing the MUC1
gene product PEM (polymorphic epithelial mucin ) as a self antigen, would
be extremely useful. To this end, we have developed transgenic...

... gene, which was very similar to the profile of expression seen in human
tissues. The antibody SM - 3 is directed to a core protein epitope,
which is selectively exposed in breast cancers and...

...more restricted distribution on normal human tissues. It was established
that the distribution of the SM - 3 epitope of PEM in the tissues of the
transgenic mice is similar to that seen...
  ; Animals; Antibodies; Blotting, Northern; Blotting, Southern; CA-15-3
Antigen; Culture Techniques; DNA --genetics--GE; DNA --isolation and
purification--IP; Genomic Library; Humans; Immunohistochemistry; Lactation
--physiology--PH; Lymphocytes--physiology--PH; Mammary...
  Chemical Name: Antibodies; CA-15-3 Antigen; Membrane Glycoproteins;
Mucins; RNA; DNA
```

13/K/2 (Item 2 from file: 155)
DIALOG(R)File 155:MEDLINE(R)

08195471 PMID: 2477336
A short sequence, within the amino acid tandem repeat of a cancer-associated mucin, contains immunodominant epitopes.
Burchell J; Taylor-Papadimitriou J; Boshell M; Gendler S; Duhig T
Imperial Cancer Research Fund, London, UK.
International journal of cancer. Journal international du cancer (UNITED STATES) Oct 15 1989, 44 (4) p691-6, ISSN 0020-7136--Print
Journal Code: 0042124
Publishing Model Print
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: MEDLINE; Completed

A short sequence, within the amino acid tandem repeat of a cancer-associated mucin , contains immunodominant epitopes.
The polymorphic epithelial mucin (PEM) appears to be the target molecule for many monoclonal antibodies (MAbs) which react with...

... have precisely mapped the epitopes of 4 MAbs reactive with the tandem repeats including one, SM - 3 , which shows enhanced tumour specificity. We report that the core of the SM - 3 epitope corresponds to the continuous amino acid sequence Pro-Asp-Thr-Arg-Pro. We also...

... However, none of these epitopes contain the proline found at the amino end of the SM - 3 determinant. These results are consistent with the idea that, in the cancer-associated mucin , premature termination of the carbohydrate side-chains results in the exposure of the SM - 3 epitope.
Descriptors: *Antigens, Tumor-Associated, Carbohydrate--genetics--GE; * DNA --genetics--GE; *Epitopes--genetics--GE; *Mucins--genetics--GE; *Repetitive Sequences, Nucleic Acid; Amino Acid Sequence; Antibodies, Monoclonal--analysis--AN; Antigens, Tumor-Associated, Carbohydrate --immunology--IM; Binding Sites, Antibody --genetics--GE; Binding Sites, Antibody --immunology--IM; Enzyme-Linked Immunosorbent Assay; Epitopes --immunology--IM; Humans; Molecular Sequence Data; Mucins--immunology...
Chemical Name: Antibodies, Monoclonal; Antigens, Tumor-Associated, Carbohydrate; Binding Sites, Antibody ; Epitopes; Mucins; DNA

13/K/3 (Item 1 from file: 159)
DIALOG(R)File 159:Cancerlit

01924587 92200415 PMID: 1372533
Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice.
Peat N; Gendler S J; Lalani N; Duhig T; Taylor-Papadimitriou J
Imperial Cancer Research Fund, Lincoln's Inn Fields, London, England.
Cancer Res (UNITED STATES) Apr 1 1992, 52 (7) p1954-60, ISSN 0008-5472 Journal Code: 2984705R
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice.

The human MUC1 gene codes for the core protein of a mucin which is expressed by glandular epithelia and the carcinomas which develop from these tissues. The...

... glycosylated in cancers, and some antibodies show specificity in their reactions with the cancer-associated mucin , which also contains epitopes recognized by T-cells from breast and pancreatic cancer patients. For evaluating the potential use of mucin -reactive antibodies and mucin -based immunogens in cancer patients, a mouse model, expressing the MUC1 gene product PEM (polymorphic epithelial mucin) as a self antigen, would be extremely useful. To this end, we have developed transgenic...

... gene, which was very similar to the profile of expression seen in human tissues. The antibody SM - 3 is directed to a core protein epitope, which is selectively exposed in breast cancers and...

...more restricted distribution on normal human tissues. It was established that the distribution of the SM - 3 epitope of PEM in the tissues of the transgenic mice is similar to that seen...

Minor Descriptors: Antibodies; Blotting, Northern; Blotting, Southern; CA-15-3 Antigen; DNA --genetics--GE; DNA --isolation and purification --IP; Genomic Library; Immunohistochemistry; Lactation--physiology--PH; Lymphocytes--physiology--PH; Mammae--physiology...

Chemical Name: Antibodies; CA-15-3 Antigen; Membrane Glycoproteins; Mucins; RNA; DNA

13/K/4 (Item 2 from file: 159)

DIALOG(R)File 159:Cancerlit

01781134 PMID: 91668429

EPITHELIAL MUCIN ANTIBODIES AND THEIR EPITOPES: CORE PROTEIN EPITOPES OF A POLYMORPHIC EPITHELIAL MUCIN (PEM).

Taylor-Papadimitriou; Burchell; Gendler; Boshell; Duhig

Imperial Cancer Res. Fund, P.O. Box 123, Lincoln's Inn Fields, London WC2A 3PX, UK

Non-serial 1989, Breast Cancer Immunodiagnosis and Immunotherapy. Ceriani RL, ed. New York, Plenum, p. 81-93, 1989.,

Document Type: MEETING PAPER

Languages: ENGLISH

Main Citation Owner: NOTNLM

Record type: Completed

EPITHELIAL MUCIN ANTIBODIES AND THEIR EPITOPES: CORE PROTEIN EPITOPES OF A POLYMORPHIC EPITHELIAL MUCIN (PEM).

Data have been obtained recently from a human mucin that is expressed by several simple epithelial cell types and abundantly by the lactating mammary gland and by many carcinomas. This mucin , called PEM because of the high degree of polymorphism seen at the DNA and protein level, is highly immunogenic, and many antibodies raised against normal and malignant epithelial...

... PEM repeat unit exhibit features that would be expected in the core protein of a mucin . There are five potential O glycosylation sites represented by serines and threonines separated by proline-rich stretches of 3, 5, and 7 AAs. The enhanced tumor specificity of the antibody SM - 3 directed to the deglycosylated PEM indicates that the epitopes to the core protein, which normally are masked, can be exposed in the

cancer-associated mucin (CAM). Thus, at least some of the difference between the normally processed mucin and the mucin expressed in breast cancers may be due to differences in glycosylation patterns. The exposure of core protein epitopes in the cancer mucin could be due to underglycosylation of potential glycosylation sites or to a reduction in the length of the added oligosaccharide side chains. The mapping of the SM - 3 and HMFG-2 epitopes to AAs around a threonine residue in the tandem repeat sequence...

... for shorter oligosaccharide side chains on the CAM is provided by the observation that the SM - 3 epitope, which is only exposed in this form of the mucin , contains extra AAs flanking the HMFG-2 epitope, some of which apparently are masked in...

13/K/5 (Item 3 from file: 159)
DIALOG(R)File 159:Cancerlit
(c) format only 2002 Dialog. All rts. reserv.

01752977 90007760 PMID: 2477336
A short sequence, within the amino acid tandem repeat of a cancer-associated mucin, contains immunodominant epitopes.
Burchell J; Taylor-Papadimitriou J; Boshell M; Gendler S; Duhig T
Imperial Cancer Research Fund, London, UK.
Int J Cancer (UNITED STATES) Oct 15 1989, 44 (4) p691-6, ISSN 0020-7136 Journal Code: 0042124
Document Type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed

A short sequence, within the amino acid tandem repeat of a cancer-associated mucin , contains immunodominant epitopes.
The polymorphic epithelial mucin (PEM) appears to be the target molecule for many monoclonal antibodies (MAbs) which react with...

... have precisely mapped the epitopes of 4 MAbs reactive with the tandem repeats including one, SM - 3 , which shows enhanced tumour specificity. We report that the core of the SM - 3 epitope corresponds to the continuous amino acid sequence Pro-Asp-Thr-Arg-Pro. We also...
... However, none of these epitopes contain the proline found at the amino end of the SM - 3 determinant. These results are consistent with the idea that, in the cancer-associated mucin , premature termination of the carbohydrate side-chains results in the exposure of the SM - 3 epitope.
Major Descriptors: *Antigens, Tumor-Associated, Carbohydrate--genetics --GE; * DNA --genetics--GE; *Epitopes--genetics--GE; *Mucins--genetics--GE; *Repetitive Sequences, Nucleic Acid
Minor Descriptors: Amino Acid Sequence; Antibodies, Monoclonal--analysis --AN; Antigens, Tumor-Associated, Carbohydrate--immunology--IM; Binding Sites, Antibody --genetics--GE; Binding Sites, Antibody --immunology--IM ; Enzyme-Linked Immunosorbent Assay; Epitopes--immunology--IM; Molecular Sequence Data; Mucins--immunology--IM...
Chemical Name: Antibodies, Monoclonal; Antigens, Tumor-Associated, Carbohydrate; Binding Sites, Antibody ; Epitopes; Mucins; DNA

13/K/6 (Item 1 from file: 73)
DIALOG(R)File 73:EMBASE
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07812092 EMBASE No: 1999301656
Expression of core 2 beta-1,6-N-acetylglucosaminyltransferase in a human pancreatic cancer cell line results in altered expression of MUC1 tumor-associated epitopes
Beum P.V.; Singh J.; Burdick M.; Hollingsworth M.A.; Cheng P.-W.
P.-W. Cheng, Dept. of Biochem./Molecular Biology, University of Nebraska Med. Center, 984525 Nebraska Medical Center, Omaha, NE 68198-4525 United States
AUTHOR EMAIL: pcheng@unmc.edu
Journal of Biological Chemistry (J. BIOL. CHEM.) (United States) 27 AUG 1999, 274/35 (24641-24648)
CODEN: JBCHA ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
LANGUAGE: ENGLISH SUMMARY LANGUAGE: ENGLISH
NUMBER OF REFERENCES: 50

...stable transfection of a human pancreatic adenocarcinoma cell line, Panc1-MUC1, with the cDNA for mucin core 2 GlcNAc-transferase (C2GnT), which creates the core 2 beta-1,6 branch in mucin -type glycans. These cells lack endogenous C2GnT activity but express a recombinant human MUC1 cDNA...
...clones expressing different levels of C2GnT were characterized using monoclonal antibodies CC49, CSLEX-1, and SM - 3 , which recognize tumor-associated epitopes. Increased C2GnT expression led to greatly diminished expression of the...

...transfectants could not bind to selectins. Increased C2GnT expression also led to masking of the SM - 3 peptide epitope, which persisted after the removal of sialic acid, further suggesting greater complexity of...
DRUG DESCRIPTORS:
complementary DNA ; mucin ; glycan; monoclonal antibody ; selectin; sialic acid; ligand

13/K/7 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

01480063 Genuine Article#: HC030 No. References: 35
Title: CHARACTERIZATION OF EPITHELIAL PHENOTYPES IN MORTAL AND IMMORTAL HUMAN BREAST CELLS
Author(s): PAINE TM; SOULE HD; PAULEY RJ; DAWSON PJ
Corporate Source: MICHIGAN CANC FDN,110 E WARREN AVE/DETROIT//MI/48201; MICHIGAN CANC FDN,110 E WARREN AVE/DETROIT//MI/48201; UNIV S FLORIDA,MED LAB/TAMPA//FL/33612; UNIV S FLORIDA,DEPT PATHOL/TAMPA//FL/33612
Journal: INTERNATIONAL JOURNAL OF CANCER, 1992, V50, N3 (FEB 1), P463-473
Language: ENGLISH Document Type: ARTICLE (Abstract Available)

...Abstract: immortal line after long-term cultivation of MCF-12M mortal cells from reduction mammoplasty tissue. DNA finger-printing demonstrated the independent, human origin and lineage of the MCF-10-2 and...

...2-dimensional gel Western blots and immunoperoxidase staining with antibodies to cytokeratins and polymorphic epithelial mucin . MCF-10M and MCF-12M retain the cytokeratin profile of the luminal cell (7, 8...

...the morphologically mixed, less-selected population of MCF-10-2. Epitopes on the polymorphic epithelial mucin , recognized by

antibodies HMFG 1, HMFG 2 and SM - 3 , were detected in the mortal cultures and in the immortal lines, indicating the occurrence of both normal and abnormal mucin processing. MCF-10, MCF-10-2 and MCF-12 cells do not form tumors in...
...Identifiers--MONOCLONAL- ANTIBODY ; KERATIN EXPRESSION; DNA; DIFFERENTIATION; MARKERS; GROWTH; HMFG-2; MCF-10; MUCIN; LINE
Research Fronts: 90-3502 002 (PROTEIN CORE OF HUMAN POLYMORPHIC EPITHELIAL MUCIN ; MARKERS FOR BREAST-CANCER; OVARIAN CARCINOMA-ASSOCIATED SEBACEOUS GLAND ANTIGEN)
90-4331 002 (KERATIN EXPRESSION...
?

PALM Intranet

Application Number [ ] Submit

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 NEWS  6  MAY 11  KOREAPAT updates resume
 NEWS  7  MAY 19  Derwent World Patents Index to be reloaded and enhanced
 NEWS  8  MAY 30  IPC 8 Rolled-up Core codes added to CA/CAplus and
                  USPATFULL/USPAT2
 NEWS  9  MAY 30  The F-Term thesaurus is now available in CA/CAplus
 NEWS 10  JUN 02  The first reclassification of IPC codes now complete in
                  INPADOC
 NEWS 11  JUN 26  TULSA/TULSA2 reloaded and enhanced with new search and
                  and display fields
 NEWS 12  JUN 28  Price changes in full-text patent databases EPFULL and PCTFULL
 NEWS 13  JUl 11  CHEMSAFE reloaded and enhanced
 NEWS 14  JUl 14  FSTA enhanced with Japanese patents
 NEWS 15  JUl 19  Coverage of Research Disclosure reinstated in DWPI

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               MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
               AND CURRENT DISCOVER FILE IS DATED 26 JUNE 2006.

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=> s muc1 and (Sm (w) 3)
L1 22 MUC1 AND (SM (W) 3)

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PROCESSING COMPLETED FOR L1
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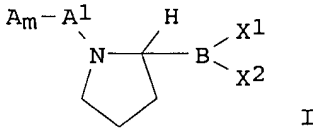
=> d l2 bib abs 1-11

L2 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:41229 CAPLUS
DN 140:105266
TI Boroproline compound combination therapy for various diseases
IN Adams, Sharlene; Miller, Glenn T.; Jesson, Michael I.; Jones, Barry
PA Point Therapeutics, Inc., USA
SO PCT Int. Appl., 125 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004004661	A2	20040115	WO 2003-US21547	20030709
	WO 2004004661	A3	20051229		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2491474	AA	20040115	CA 2003-2491474	20030709
	AU 2003248921	A1	20040123	AU 2003-248921	20030709
	US 2004077601	A1	20040422	US 2003-616694	20030709
	US 2005084490	A1	20050421	US 2003-616409	20030709
	EP 1578362	A2	20050928	EP 2003-763433	20030709
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006506442	T2	20060223	JP 2004-562639	20030709
	CN 1802090	A	20060712	CN 2003-821282	20030709
PRAI	US 2002-394856P	P	20020709		
	US 2002-414978P	P	20021001		
	US 2003-466435P	P	20030428		
	WO 2003-US21547	W	20030709		

GI



I

AB A method is provided for treating subjects with combination therapy including compds. of Formula I (wherein m is an integer between 0 and 10, inclusive; A and A1 may be L- or D-amino acid residues, the C bonded to B is in the L-configuration, and each X1 and X2 is, independently, a hydroxy group or a group capable of being hydrolyzed to a hydroxy group in aqueous solution at physiol. pH). It was surprisingly discovered that this combination enhanced the efficacy of both agents, and that administration of Formula I compds. induced cytokine and chemokine production in vivo. The combinations can be used to enhanced ADCC, stimulate immune responses and /or patient and treat certain disorders. The invention also relates to kits and compns. relating to such combinations.

L2 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2004:41226 CAPLUS
DN 140:105321
TI Methods and compositions relating to isoleucine boroproline compounds
IN Adams, Sharlene; Miller, Glenn T.; Jesson, Michael I.; Jones, Barry
PA Point Therapeutics, Inc., USA
SO PCT Int. Appl., 152 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004004658	A2	20040115	WO 2003-US21405	20030709
	WO 2004004658	A3	20050804		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2491466	AA	20040115	CA 2003-2491466	20030709
	AU 2003265264	A1	20040123	AU 2003-265264	20030709
	US 2004077601	A1	20040422	US 2003-616694	20030709
	US 2005084490	A1	20050421	US 2003-616409	20030709
	EP 1578434	A2	20050928	EP 2003-763380	20030709
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
	JP 2006507352	T2	20060302	JP 2004-562634	20030709
	CN 1802090	A	20060712	CN 2003-821282	20030709
PRAI	US 2002-394856P	P	20020709		
	US 2002-414978P	P	20021001		
	US 2003-466435P	P	20030428		
	WO 2003-US21405	W	20030709		

OS MARPAT 140:105321
AB A method for treating subjects with, inter alia, abnormal cell proliferation or infectious disease using agents of formula (I,

AmNHCH(CH(CH3)CH2CH3)COA1R) (where Am and A1 are amino acids and R = organo boronates, organo phosphonates, fluoroalkyl ketones, alphaketos, N-peptiolyl-O-(acylhydroxylamines), azapeptides, azetidines, fluoroolefins dipeptide isosteres, peptidyl (α-aminoalkyl) phosphonate esters, aminoacyl pyrrolidine-2-nitriles and 4-cyanothiazolidides) is claimed. Methods for stimulating an immune response using the compds. of the invention are also claimed. Compns. containing Ile-boroPro compds. are also provided as are kits containing the compns. The invention embraces the use of these compds. alone or in combination with other therapeutic agents.

L2 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
AN 1999:568459 CAPLUS
DN 131:298415
TI Expression of core 2 β-1,6-N-acetylglucosaminyltransferase in human pancreatic cancer cell line results in altered expression of MUC1 tumor-associated epitopes
AU Beum, Paul V.; Singh, Jaswant; Burdick, Michael; Hollingsworth, Michael A.; Cheng, Pi-Wan
CS Department of Biochemistry and Molecular Biology, University of Nebraska Medical Center, Omaha, NE, 68198, USA
SO Journal of Biological Chemistry (1999), 274(35), 24641-24648
CODEN: JBCHA3; ISSN: 0021-9258
PB American Society for Biochemistry and Molecular Biology
DT Journal
LA English
AB Many tumor-associated epitopes possess carbohydrate as a key component, and thus changes in the activity of glycosyltransferases could play a role in generating these epitopes. In this report the authors describe the stable transfection of a human pancreatic adenocarcinoma cell line, Panc1-MUC1, with the cDNA for mucin core 2 GlcNAc-transferase (C2GnT), which creates the core 2 β-1,6 branch in mucin-type glycans. These cells lack endogenous C2GnT activity but express a recombinant human MUC1 cDNA. C2GnT-transfected clones expressing different levels of C2GnT were characterized using monoclonal antibodies CC49, CSLEX-1, and SM-3, which recognize tumor-associated epitopes. Increased C2GnT expression led to greatly diminished expression of the CC49 epitope, which the authors identified as NeuAcα2,6-(Galβ1,3)GalNAcα-Ser/Thr in the Panc1- MUC1 cells. This was accompanied by the emergence of the CSLEX-1 epitope, sialyl Lewis x (NeuAcα2,3Galβ1,4(Fucα1,3)-GlcNAc-R), an important selectin ligand. Despite this, however, the C2GnT transfectants could not bind to selectins. Increased C2GnT expression also led to masking of the SM-3 peptide epitope, which persisted after the removal of sialic acid, further suggesting greater complexity of the core 2-associated O-glycans on MUC1. The results of this study suggest that C2GnT could play a regulatory role in the expression of certain tumor-associated epitopes.
RE.CNT 50 THERE ARE 50 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN
AN 1999:25098 CAPLUS
DN 130:221860
TI A short synthetic peptide (DTRPAP) induces anti-mucin (MUC-1) antibody, which is reactive with human ovarian and breast cancer cells
AU Avichezer, Dody; Taylor-Papadimitriou, Joyce; Arnon, Ruth
CS Department of Immunology, The Weizmann Institute of Science, Rehovot, 76100, Israel
SO Cancer Biochemistry Biophysics (1998), 16(1-2), 113-128
CODEN: CABCD4; ISSN: 0305-7232
PB Gordon & Breach Science Publishers
DT Journal
LA English
AB The present study describes the production of a synthetic hexapeptide

(DTRPAP)-based anti-mucin (MUC-1) antibody, similar to those produced using either the intact mucin antigen or tumor exts. This antibody was generated by immunization of rabbits with the synthetic peptide conjugated to bovine serum albumin as a carrier. Using both the ELISA and FACS anal. methods, we have shown that the antibody is reactive with human ovarian and breast cancer cells, but not with normal epithelial breast cells. This antibody is different from the previously reported anti-mucin HMFG-1, HMFG-2 and SM-3 monoclonal antibodies, since competitive expts. with the free synthetic peptide revealed only a 30% inhibition of HMFG-1 binding to the ovarian (OVCAR-3) cancer cells, as compared to 78% inhibition of the anti-synthetic peptide antibody. The peptide was non-inhibitory for HMFG-2, and induced a significant and reproducible stimulation of the SM-3 binding activity to the tumor cells.

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 1995:755226 CAPLUS
DN 123:195339
TI Association of sialyl-Lewisa and sialyl-Lewisx with MUC-1 apomucin in a pancreatic cancer cell line
AU Ho, Jenny J. L.; Siddiki, Bader; Kim, Young S.
CS Gastrointestinal Research Lab., Univ. of California, San Francisco, CA, USA
SO Cancer Research (1995), 55(16), 3659-63
CODEN: CNREA8; ISSN: 0008-5472
PB American Association for Cancer Research
DT Journal
LA English
AB The authors have shown previously that the mucins of the human pancreatic cancer cell line, SW1990, have both sialyl-Lewisa and sialyl-Lewisx carbohydrate ligands that are implicated in tumor cell metastasis. In the present study, the authors undertook to identify the protein core of these mucins. SW1990 mucins that carry sialyl-Lewisa and sialyl-Lewisx bound to the MUC1 peptide-specific mAb 139H2. Removal of most of the sialic acids from SW1990 mucins by neuraminidase greatly enhanced binding of two other MUC1 peptide specific antibodies, HMFG-2 and SM-3. After removal of sialic acids, most of the mucins rich in sialyl-Lewisa and sialyl-Lewisx oligosaccharides no longer bound to a DEAE-cellulose column at pH 8.0. These results indicate that at least part of the sialyl-Lewisa and sialyl-Lewisx in SW1990 cells is associated with the MUC1 polypeptide. Moreover, sialic acids play an important role in determining the net neg. charge of sialyl-Lewisa and sialyl-Lewisx rich mucins and in obscuring MUC1 peptide regions.

L2 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
AN 1995:590744 CAPLUS
DN 123:54046
TI Access to peptide regions of a surface mucin (MUC1) is reduced by sialic acids
AU Ho, Jenny J. L.; Cheng, Sandra; Kim, Y. S.
CS Gastrointestinal Research Lab., Veterans Affairs Medical Center, University of California, San Francisco, CA, USA
SO Biochemical and Biophysical Research Communications (1995), 210(3), 866-73
CODEN: BBRCA9; ISSN: 0006-291X
PB Academic
DT Journal
LA English
AB Mucinous glycoproteins are present on the surfaces of tumor cells. Knowledge of which parts of the mucin mol. are accessible targets for cells of the immune system is important in the development of successful therapeutic approaches. One breast (ZR-75-1), two colon (Colo 205 and SW1116), and three pancreas (Capan-2, HPAF and SW1990) cancer cell lines

were examined The reactivities of antibodies HMFG-2, specific for the tripeptide (DTR) in the 20 amino acid tandem repeat of MUC1, and SM-3 (PDTRP) were greatly enhanced by pre-treating cells with an inhibitor of O-glycosylation, benzyl-α-N-acetylgalactosamide. However, desialylation of cell surfaces with neuraminidase or pre-treatment with an inhibitor of carbohydrate processing, monensin, also greatly enhanced the reactivities of HMFG-2, SM-3 and HMFG-1 (PDTR). Thus, sialic acids on termini of neighboring oligosaccharides significantly limit access to the peptide region recognized by antibodies HMFG-1/2 and SM-3.

L2 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4
AN 1995:510392 CAPLUS
DN 122:309588
TI Studies on the order and site specificity of GalNAc transfer to MUC1 tandem repeats by UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferase from milk or mammary carcinoma cells
AU Stadie, Tanja R. E.; Chai, Wengang; Lawson, Alexander M.; Byfield, Peter G.; Hanisch, Franz-Georg
CS Institute Immunobiology, Univ. Clinic, Cologne, Germany
SO European Journal of Biochemistry (1995), 229(1), 140-7
CODEN: EJBCAI; ISSN: 0014-2956
PB Springer
DT Journal
LA English
AB A synthetic peptide [TAP25, (T1aAPPAHGVT9S10APDT14RPAPGS20)T1bAPPA5b] corresponding to one repeat (T1a-S20) and five overlapping amino acids (T1b-A5b) of the MUC1 core protein served as an acceptor substrate for in vitro glycosylation. TAP25 was glycosylated using the detergent-solubilized UDP-GalNAc:polypeptide N-acetylgalactosaminyltransferases from the breast carcinoma cell line T47D, the colon carcinoma cell line HT29 and from human premature skim milk. The glycosylated peptides were isolated by ultrafiltration, purified by reverse-phase HPLC and further analyzed by liquid secondary ion mass spectrometry (LSIMS). Three different glycosylation species, mono-, di- and triglycosylated peptides were identified. Automated Edman sequencing and LSIMS of proteolytic fragments independently revealed the sites of GalNAc incorporation and confirmed that the threonine residues Thr9 and Thr1b are the preferred sites of glycosylation independent of the enzyme source, while Thr14 remained non-glycosylated even with the enzyme preparation from milk. In addition, evidence was obtained that at least 20% of the glycosylated peptides exhibited GalNAc incorporation at Ser20. On the basis of kinetic studies a preferred sequence of GalNAc addition to the three acceptor sites has been concluded (Thr9 → Thr1b → Ser20). Although Thr14 within the PDTRP motif of the tandem repeats remained nonglycosylated, the introduction of GalNAc into adjacent positions significantly decreased the immunoreactivity of antibodies SM-3, HMFG-1 and HMFG-2 defining overlapping epitopes of this motif. It is assumed that glycosylation at Thr9, Thr1b and Ser20 distorts the peptide conformation of the binding epitope.

L2 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
AN 1993:166346 CAPLUS
DN 118:166346
TI Multiple forms of intracellular and secreted mucins in a pancreatic cancer cell line
AU Ho, Jenny J. L.; Bi, Ning; Siddiki, Bader; Chung, Yong Suk; Yuan, Mei; Kim, Young S.
CS Gastrointest. Res. Lab., Veterans Aff. Med. Cent., San Francisco, CA, 94121, USA
SO Cancer Research (1993), 53(4), 884-90
CODEN: CNREA8; ISSN: 0008-5472
DT Journal
LA English

AB Mucins have been implicated in circumventing the defenses of the body against tumorigenesis. A better understanding of the structures of mucins may assist in the development of new therapeutic approaches. Monoclonal antibody Ea6, developed against mucins purified from xenografts of the pancreatic cancer cell line SW1990, was used to identify a new type of pancreatic cancer mucin. The following characteristics suggest that Ea6 antibody reacts with the core structure of O-linked oligosaccharides, the Tn antigen (N-acetylgalactosamine-serine/threonine): (a) increased reactivity with ovine and bovine submaxillary mucins after desialylation; (b) reactivity was inhibitable by N-acetylgalactosamine; and (c) no reactivity with blood group A oligosaccharides. Ea6 mucins from cultured SW1990 cells had lower buoyant densities (1.36 vs. 1.44 g/mL) than mucins identified by another monoclonal antibody directed against SW1990 mucins, SPan-1, and were less acidic. High d. and mol. mass (≥400 kDa) secreted antigens were not affected by sulfhydryl bond reduction After partial deglycosylation secreted SPan-1 antigens reacted with MUC1 peptide specific antibodies, SM-3 and HMFG-2, as well as polyclonal antisera directed against deglycosylated xenograft mucins. However, Ea6 antigens did not. SW1990 cytosol also contained SPan-1 antigens with apparent mol. wts. of 160,000 and 210,000 and low buoyant densities (≤1.22 g/mL). These reacted with monoclonal antibodies specific for the MUC1 apomucin with no prior treatment. No Ea6 reactivity was detected with this fraction. Thus, Ea6 antibody identifies a new population of mucins that is distinct from SPan-1 mucins.

L2 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 6
AN 1992:212528 CAPLUS
DN 116:212528
TI Tissue-specific expression of a human polymorphic epithelial mucin (MUC1) in transgenic mice
AU Peat, Nigel; Gendler, Sandra J.; Lalani, El Nasir; Duhig, Trevor; Taylor-Papadimitriou, Joyce
CS Imp. Cancer Res. Fund, London, WC2A 3PX, UK
SO Cancer Research (1992), 52(7), 1954-60
CODEN: CNREA8; ISSN: 0008-5472
DT Journal
LA English
AB The human MUC1 gene codes for the core protein of a mucin which is expressed by glandular epithelia and the carcinomas which develop from these tissues. The core protein is aberrantly glycosylated in cancers, and some antibodies show specificity in their reactions with the cancer-associated mucin, which also contains epitopes recognized by T-cells from breast and pancreatic cancer patients. For evaluating the potential use of mucin-reactive antibodies and mucin-based immunogens in cancer patients, a mouse model, expressing the MUC1 gene product PEM (polymorphic epithelial mucin) as a self antigen, would be extremely useful. To this end, the authors have developed transgenic mouse strains expressing the human MUC1 gene product in a tissue-specific manner. The TG4 mouse strain was established using a 40-kilobase fragment containing 4.5 kilobases of 5' and 27 kilobases of 3' flanking sequence. The TG18 strain was developed using a 10.6-kilobase SacII fragment from the 40-kilobase fragment; this fragment contained 1.6 kilobases of 5' sequence and 1.9 kilobases of 3' flanking sequence. Both strains showed tissue specificity of expression of the MUC1 gene, which was very similar to the profile of expression seen in human tissues. The antibody SM-3 is directed to a core protein epitope, which is selectively exposed in breast cancers and which shows a more restricted distribution on normal human tissues. It was established that the distribution of the SM-3 epitope of PEM in the tissues of the transgenic mice is similar to that seen in humans. The transgenic mouse strains described here should form the basis for the development of a preclin. model for the evaluation of PEM-based antigens and of antibodies directed to PEM in cancer therapy.

L2 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 7
AN 1991:605464 CAPLUS
DN 115:205464
TI Purification and characterization of a membrane-bound and a secreted mucin-type glycoprotein carrying the carcinoma-associated sialyl-Lea epitope on distinct core proteins
AU Baeckstroem, Dan; Hansson, Gunnar C.; Nilsson, Olle; Johansson, Christina; Gendler, Sandra J.; Lindholm, Leif
CS Dep. Med. Biochem., Univ. Goeteborg, Goeteborg, S-400 33, Swed.
SO Journal of Biological Chemistry (1991), 266(32), 21537-47
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
AB Two mucin-type glycoproteins detected by the monoclonal antibody C50, which reacts with the carcinoma-associated sialyl-Lewis a and sialyl-lactotetraoase epitopes, were found in secreted and solubilized materials from the colon carcinoma cell line COLO 205. The larger glycoprotein (H-CanAg; heavy cancer antigen) was predominantly found in exts. of cells grown in vitro or as nude mice xenografts, whereas the smaller species (L-CanAg; light cancer antigen) was the major component in spent culture medium and serum from grafted mice. H-CanAg is apparently membrane bound. The 2 glycoproteins were purified from xenograft exts. and spent culture medium using perchloric acid precipitation, monoclonal antibody affinity purification, ion exchange chromatog., and gel filtration. Neither glycoprotein was affected by reduction and alkylation in guanidine HCl. Using SDS-PAGE, relative mol. masses were estimated to be 600-800 kDa for H-CanAg and 150-300 kDa for L-CanAg. Carbohydrate anal. revealed that the CanAg glycoproteins were highly glycosylated (81-89% carbohydrate by weight), carrying carbohydrate chains with average lengths of 13-18 sugars which were rich in fucose and sialic acid (2-3 residues/chain for each sugar). L-CanAg isolated from spent medium was glycosylated to a higher degree than its counterpart from xenograft extract Immunochem. studies of the intact glycoproteins showed that both H-CanAg and L-CanAg expressed the monoclonal antibody-defined, sialic acid-containing carbohydrate epitopes CA203 and CA242 as well as the Lewis a blood group antigen, whereas only H-CanAg appeared to carry the sialyl-Lewis x epitope. A rabbit antiserum against the cytoplasmic C-terminal part of the MUC1 gene product, core protein of the carcinoma-associated polymorphic epithelial mucin (PEM) and DU-PAN-2, reacted with H-CanAg. Deglycosylated H-CanAg but not L-CanAg was recognized by the monoclonal antibodies SM-3 and HMFG-2, directed to the tandem repeat of the PEM apoprotein. Comparison of amino acid compns. confirmed that H-CanAg apoprotein is closely related to the MUC1 protein whereas L-CanAg is not. Thus, colon carcinoma cells can express 2 mucins with several carcinoma-associated carbohydrate epitopes in common but differing in core protein structure and cellular localization.

L2 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 8
AN 1991:605798 CAPLUS
DN 115:205798
TI Expression of the gene coding for a human mucin in mouse mammary tumor cells can affect their tumorigenicity
AU Lalani, El Nasir; Berdichevsky, Feodor; Boshell, Martina; Shearer, Moira; Wilson, David; Stauss, Hans; Gendler, Sandra J.; Taylor-Papadimitriou, Joyce
CS Imp. Cancer Res. Fund, London, WC2A 3PX, UK
SO Journal of Biological Chemistry (1991), 266(23), 15420-6
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English
AB The human epithelial mucin which is the product of the MUC1 gene is expressed by many carcinomas, including those of breast, ovary, colon, and lung. The core protein is aberrantly glycosylated in the tumors

resulting in the exposure or appearance of novel epitopes. To examine the possibility of using the MUC1 gene and its products in active immunization against breast and other carcinomas, the authors have developed a syngeneic mouse model, by transfecting the gene into the mouse mammary epithelial tumor cell 410.4. An 8.3-kilobase EcoRI fragment of the gene was transfected using the expression vector pEMSV scribe α2. Transcripts of the correct size, initiating from the transcriptional start site seen in human cells, were observed in the transfectants. The mucin was expressed in the cytoplasm and in the membrane, and the glycosylation pattern appeared to be similar to that seen in human tumor cells, since the core protein epitopes recognized by antibodies HMFG-1, HMFG-2, and SM-3 were exposed. The 410.4 transfectants expressing the human mucin showed a reduction in tumor incidence at low inocula and a delay in tumor growth at higher inocula. Pretreatment with 104 transfected cells could inhibit the development of tumors from a subsequent inoculum of 106 transfectants, but had no effect on the tumor development of the untransfected 410.4 cells. These results suggest that the human mucin expressed by the 410.4 cells may mobilize an immune response which inhibits tumor development. They also indicate that the mouse model will be useful for evaluation of efficacy of immunogens based on the MUC1 gene and its product.

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#7	Search **" epithelial mucin"** Limits: **Publication Date to 1990**	13:25:07	56
#3	Search **"polymorphic epithelial mucin"** Limits: **Publication Date to 1990**	13:20:34	14
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